

In the Matter of)
)
Regulation of Business Data Services) WC Docket No. 17-144
for Rate-of-Return Local Exchange)
Carriers)

Exhibit B

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)
)
Regulation of Business Data Services) WC Docket No. 17-144
for Rate-of-Return Local Exchange)
Carriers)

DECLARATION OF KEN PFISTER

I, Ken Pfister, hereby declare the following:

1. I am Vice President-Strategic Policy for Great Plains Communications and I have been asked to provide information regarding Great Plains Communications' historical provision of certain business data services.

2. The following data represent the annual percentage change in DS1 and DS3 time division multiplex ("TDM") and Ethernet service channels in operation at the end of each designated calendar year:

	Dec 14	Dec 15	Dec 16	Dec 17	4 YR AVG
TDM	2.4%	13.4%	-13.2%	-9.6%	-1.8%
Ethernet	20.0%	10.3%	15.8%	15.5%	15.4%

3. I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge, information and belief.

/s/ Ken Pfister
Ken Pfister

Dated: June 18, 2018

Exhibit C

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)
)
Regulation of Business Data Services) WC Docket No. 17-144
for Rate-of-Return Local Exchange)
Carriers)

DECLARATION OF MICHAEL T. SKRIVAN

I, Michael T. Skrivan, hereby declare the following:

1. I am Vice President – Regulatory for Consolidated Communications. I have been asked to provide information regarding Consolidated’s historical provision of certain business data services.

2. The following data represent the annual percentage change in DS1 and DS3 time division multiplex (“TDM”) and Ethernet service channels in operation at the end of each designated calendar year:

	Dec 14	Dec 15	Dec 16	Dec 17	4 YR AVG
TDM	-18.8%	-10.7%	-18.3%	-7.9%	-11.4%
Ethernet	30.4%	6.7%	18.9%	53.0%	38.3%

3. I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge, information and belief.

/s/ Michael T. Skrivan
Michael T. Skrivan

Dated: June 18, 2018

EXHIBIT D

JUNE 15, 2018



COMPARISON OF CHARACTERISTICS OF CONSOLIDATED COMMUNICATIONS, RATE OF RETURN STUDY AREAS TO ADJACENT AND SURROUNDING PRICE CAP STUDY AREAS

Prepared for
Consolidated Communications, Inc.

PREPARED BY:

CONNIE WIGHTMAN
HAL STRINGER
DON GALE

 **Inteserra**
CONSULTING GROUP

Comparison of Characteristics of Consolidated Communications' Rate of Return Study Areas to Adjacent and Surrounding Price Cap Study Areas

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Introduction

The objective of this report is to investigate whether the Consolidated Communications Rate of Return (ROR) ILECs are operating under similar demographic and competitive conditions to those of the rural areas served by Price Cap carriers which would warrant regulatory parity for Business Data Services.

This resulting report identifies and highlights the similarities between Consolidated Rate of Return (ROR) study areas and adjacent rural areas served by Price Cap carriers. We conclude the demographic and competitive conditions for Consolidated's ROR companies are very similar to surrounding price cap areas.

Methodology and Data Sources

Proximity to Price Cap Rural Markets

In order to compare Consolidated rural areas with the rural areas of nearby Price Cap carriers, it is necessary to define rural areas and determine market characteristics. For purposes of this study, rural areas are those areas that are not identified by the US Census Bureau as “Urbanized Areas”. The Census Bureau defines Urbanized Areas as those areas with populations of 50,000 or more. Using this standard, the resulting “rural” areas will include “Urban Clusters” which are areas with populations of 2,500 up to 50,000. Many of the small towns in rural areas qualify as Urban Clusters. In this study only a few Urban Clusters fall within Consolidated ROR study areas; the majority of Urban Clusters in this study are included in Price Cap rural areas, which contributes to slightly higher population densities in those areas.¹

Initially, a 50-mile radius around each Consolidated Rate of Return (ROR) area provided a starting point for determining proximity between Price Cap and Consolidated Rate of Return (ROR) companies. Within a 50-mile radius, 31% of all Census tracts are rural – non-urbanized. When the radius is adjusted to 25 miles, 35% of the tracts meet the definition of rural used in this study. Looking individually at each Consolidated ROR area, the overall result of shifting from 50 to 25 miles varies by area, but many larger urbanized areas are eliminated by the reduction. Since the rural characterization of the areas in this study is more consistent at 25 miles, the study is based on the 25-mile radius as the measure of proximity for purposes of the comparisons. It is also assumed that the 25-mile radius is more likely to reflect the communities of interest in a given area.

The study area boundaries of each of the Consolidated ROR companies and those areas within the 25-mile radius of those study areas are overlaid on Census tract boundaries. The data for 100% of each Consolidated ROR study area are used in the analyses. Where multiple Consolidated study areas are clustered together, the group of study areas is used. Census tracts that intersect with urbanized areas served by Price Cap ILECs are deleted for purposes of this study. Tracts containing urban clusters are not removed. This exercise is repeated for each of the Consolidated ROR areas (or cluster of areas) to develop a hypothetically rural Census tract list within a 25-mile proximity of the target area. Each tract that intersects with a Consolidated ROR company is identified. The remaining tracts within the 25-mile radius are identified as Price Cap, ROR, or both.

This study investigates all of the Consolidated Communications Rate of Return ILEC study areas. To make sure the methodology selected could produce results that yield meaningful information, and which can be replicated, one study area cluster was selected for an initial test case. For the initial test case, the Taconic and Berkshire telephone corporations were used. These two ILECs operated by Consolidated Communications along the rural New York-Massachusetts state line are subject to Rate of Return Pricing regulation. The two companies have two study areas:

NY	BERKSHIRE TEL CORP	150073	ROR
NY	TACONIC TEL CORP	150084	ROR

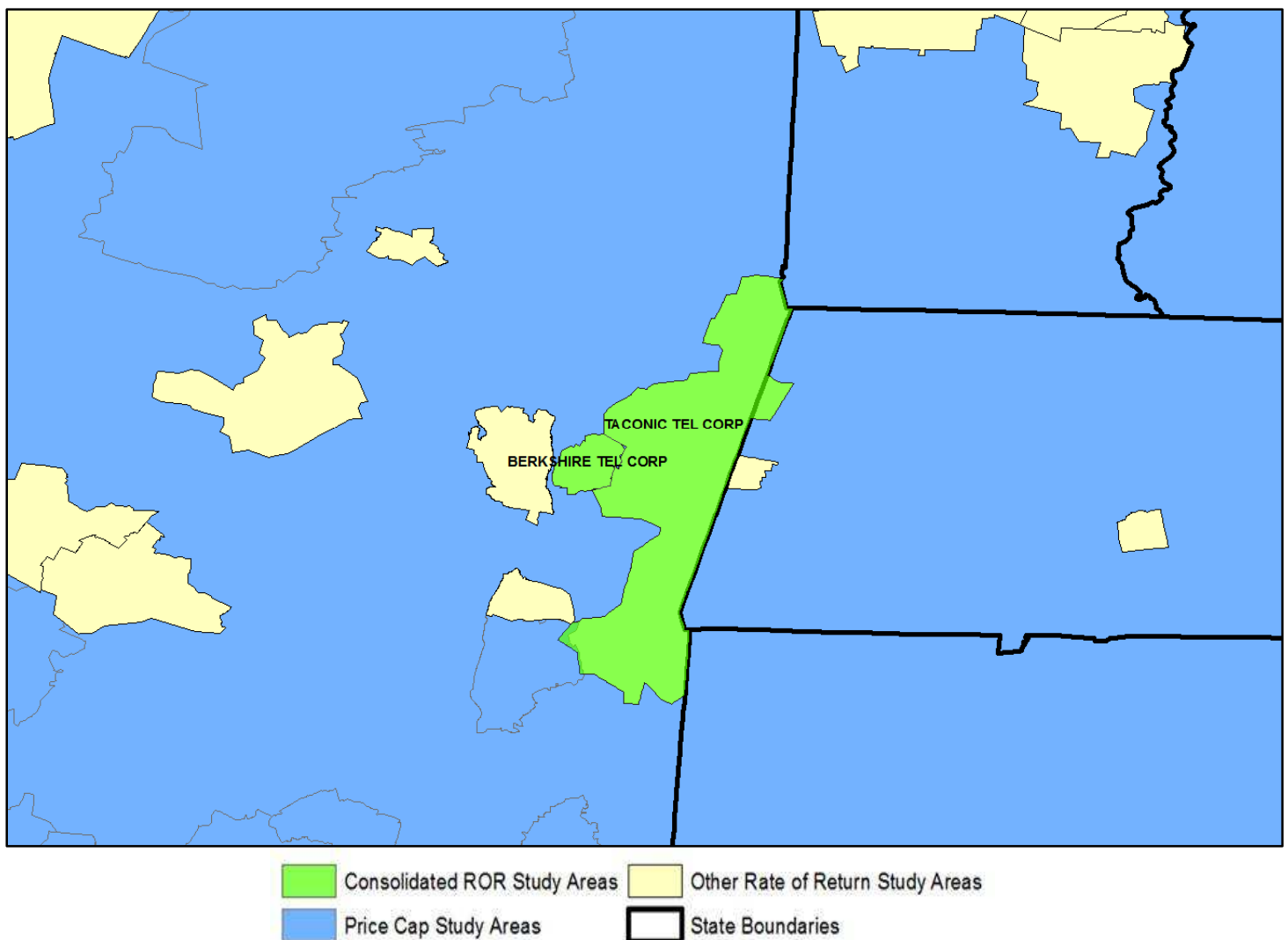
¹ More information on the Census Bureau urban-rural definitions are available online at <https://www.census.gov/geo/reference/urban-rural.html>. Data sources are provided as a bibliography in Appendix 2.

The three maps below illustrate the process of selecting rural tracts. ILEC service to most of Massachusetts and New York State is provided by Price Cap carriers (blue below). The green areas are Consolidated's ROR areas; services in the light areas are provided by other ROR carriers and the striped areas show where the Consolidated ROR study area and the Price Cap study areas are in the same Census tract. The first map combines the shape files for the study areas within a 25-mile radius of the Consolidated study areas on one map. Map B shows the Census tracts that intersect the study areas on Map A. Map C deletes the Census tracts for urbanized areas, which should yield Consolidated ROR areas Census tracts and tracts for rural Price Cap surrounding areas. The data from these Census tracts are the source data for this study. This process was repeated for all of the 20 clusters that include all of the Consolidated ROR areas.

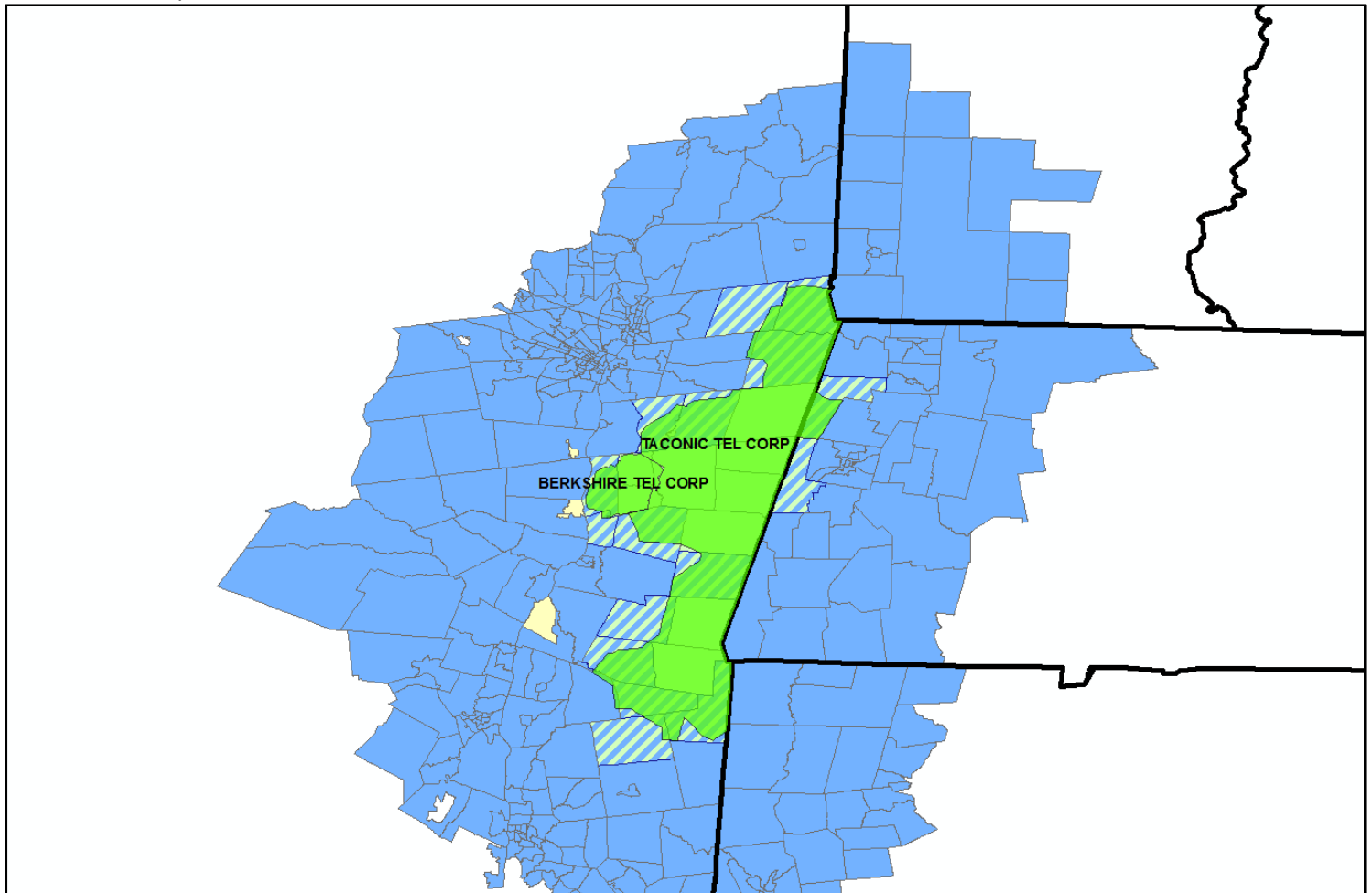
Maps A and C are provided for each of the 20 Consolidated ROR areas in this report.

Map A: Study Area Boundaries in the 25-Mile Radius

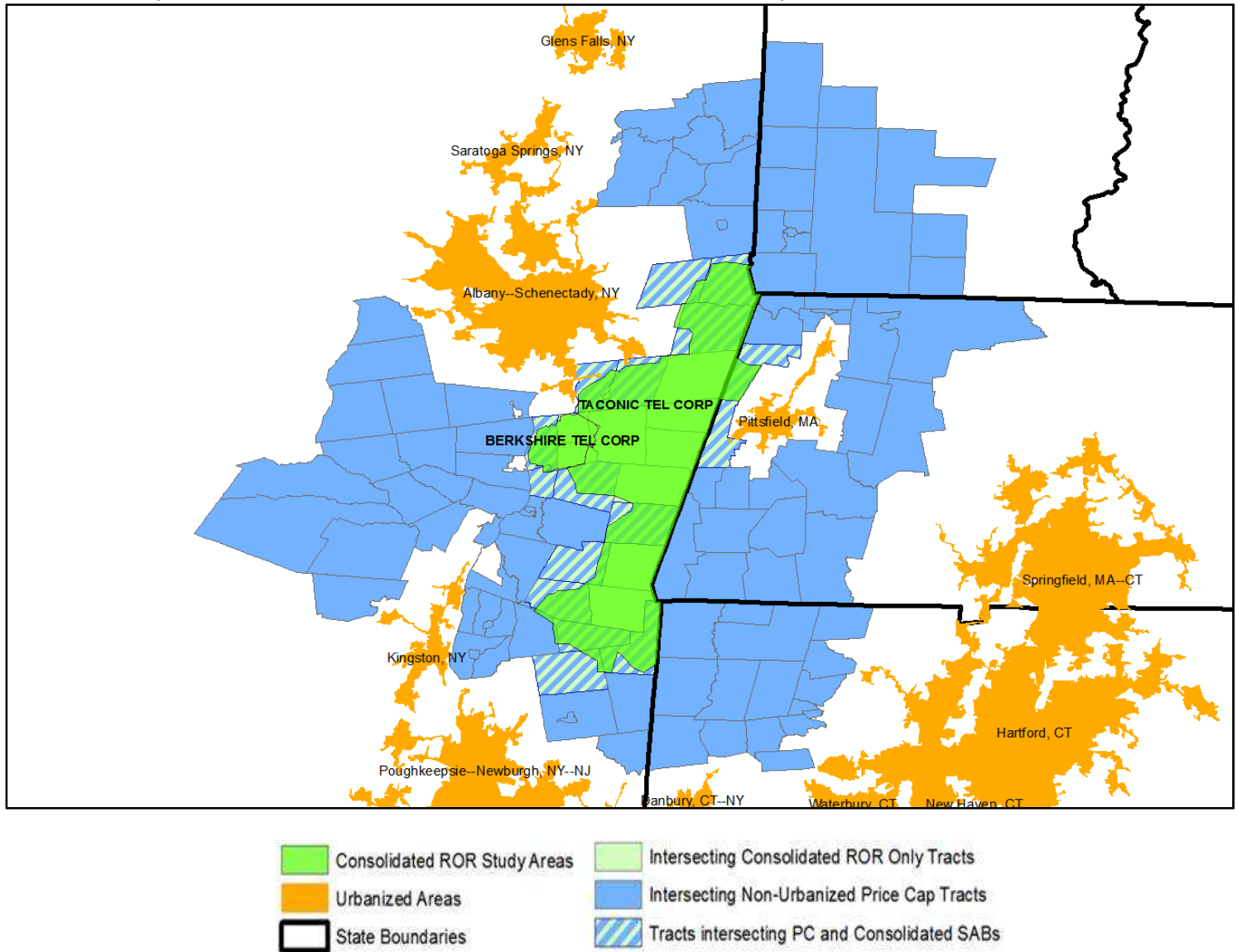
This map combines the shape files for the study area boundaries within the designated radius on one map.



Map B: All Census Tracts within the 25-Mile Radius



Map C: All Census Tracts within the 25-Mile Radius, minus Price Cap Tracts that intersect Urbanized Areas



Methodology for Assigning Study Area Data

To compare Consolidated rural study areas to similar Price Cap rural areas, the comparable rural Price Cap (PC) areas were isolated as described above by identifying and removing the remaining urbanized areas from the Price Cap sample. For Census tracts that intersect a Consolidated ROR area, the tract and its associated demographic and competitive data are assigned to the entire Consolidated ROR study area code (SAC). For Census tracts that do not intersect with a Consolidated ROR SAC, but do intersect with a Price Cap carrier SAC and are within 25 miles of the Consolidated ROR SAC, the Census tract and its associated data are assigned to the Price Cap carrier study area. Where the Census tract only intersects a nonaffiliated ROR carrier, the Census data is assigned to the unaffiliated rate of return carrier and excluded from the analysis.

Methodology for Calculating Demographic Data

Based on the selection criteria described above, US Census demographic data for the rural tracts in the 25-mile radius are compiled and used to compute Population and Housing Unit densities based on the 2010 Census and the 2016 American Community Survey (ACS) Estimate. The Land Area in Square Miles used in the calculation of density is based on the shape files and percent land area for the compiled tracts.

The data for the Taconic and Berkshire companies:

Category	Number of Tracts in Category	Category Land Area in Square Miles	2010 Census Population	2016 ACS Population Estimate	2010 Census Housing Units	2016 ACS Housing Units Estimate	2010 Census Population Density	2016 ACS Population Est Density	2010 Census Housing Units Density	2016 ACS Housing Units Est Density
All Tracts	361	6500	1340949	1337812	624023	624690	206.30	205.82	96.00	96.11
Urbanized Area Tracts	241	1907	983845	986708	431959	432453	n/a	n/a	n/a	n/a
Non-Urbanized Area Tracts	120	4593	357104	351104	192064	192237	77.75	76.44	41.82	41.85
PC Non-Urbanized Area Tracts	106	4235	318602	313617	173183	173254	75.23	74.05	40.89	40.91
Consolidated ROR Tracts	25	952	68637	68383	35922	36024	72.10	71.83	37.73	37.84
Overlapping ROR & PC Tracts	15	610	41118	41365	21013	20963	67.41	67.81	34.45	34.37

Methodology for Quantifying Competition and Broadband Deployment

Direct data are not available to determine the extent of competitive interoffice or middle-mile facilities between the Consolidated ROR markets and the outside world as compared to the data for nearby rural Price Cap markets. Broadband availability data from FCC Form 477 is used as a proxy indicator of the extent of available competitive backhaul capacity.

The prevalence of competitive cable services offering broadband internet access services in the Consolidated study areas is compared to the surrounding rural price cap areas in this study. As shown in the table below, in the Taconic and Berkshire study areas, the percentage of Census blocks with business cable broadband available as a percentage of all Census blocks in the tracts in the sample is similar to that of the surrounding Price Cap areas.

The data for the Taconic and Berkshire companies:

Category	Number of Tracts in Category	Number of Blocks in Category	Number of Tracts with Business Cable Service Offered	Number of Blocks with Business Cable Service Offered	Number of Tracts with Business Fiber Service Offered	Number of Blocks with Business Fiber Service Offered	Percent of Blocks with Business Cable Service Offered	Percent of Blocks with Business Fiber Service Offered
All Tracts	361	45801	353	33254	327	9304	72.61%	20.31%
Urbanized Area Tracts	241	24267	241	22153	232	7364	91.29%	30.35%
Non-Urbanized Area Tracts	120	21534	112	11101	95	1940	51.55%	9.01%
PC Non-Urbanized Area Tracts	106	19458	100	10605	87	1768	54.50%	9.09%
Consolidated ROR Tracts	25	4475	23	1607	16	141	35.91%	3.15%
Overlapping ROR & PC Tracts	15	2665	14	1222	12	120	45.85%	4.50%

This study also compares the availability of fiber to-the-premises (FTTP) broadband internet access service (BIAS) by all carriers in the Consolidated markets to the surrounding Price Cap markets. The presence of fiber to the premises is often a corollary to the presence of interoffice or middle mile fiber, as it usually follows that the economics of fiber to the premises for BIAS does not make sense where the upstream fiber capacity does not exist to connect to the global internet. Therefore it is logical to consider the availability of FTTP as indicative of the presence of competitive middle mile or interoffice facilities. The percentage of Census blocks with business fiber to the premises deployed for broadband, as a percentage of all Census blocks in the tracts in the sample, is compared as a further indicator.

On the surface, broadband availability data does not always show a direct similarity in Price Cap rural areas and Consolidated ROR study areas. In general, where broadband penetration is low throughout the tracts that intersect the 25-mile radius, it is somewhat lower in the Consolidated ROR areas than in the Price Cap rural areas. Conversely, where broadband penetration is high throughout the area, it is higher in the Consolidated ROR area than in the rural Price Cap surrounding areas.

Analysis of Comparable Rural Areas

Analysis of Proximity to Price Cap Rural Markets

This study relies on the US Census Bureau designation of rural areas, which are those areas that are not defined as urban. Using a complex study of density and land use, the Census Bureau has mapped urbanized areas. This study excludes the Census Bureau identified urbanized areas. As illustrated by the maps in this study, Consolidated ROR study areas are, for the most part, surrounded by Price Cap ILEC areas that fit the definition of rural areas.

In addition to relying on the Census Bureau identification of non-urbanized areas, this study also observes that in most cases, both the Consolidated ROR study areas and the surrounding Price Cap carrier areas are well below the average population and housing unit densities for all the tracts in the study. The average estimated 2016 population density for the urbanized tracts within a 25-mile radius of any of the Consolidated ROR cluster areas is 458 people and 201 housing units per square mile. By contrast, after removing the urbanized tracts, the average density is 34 people and 16 housing units per square mile. This confirms that the tracts that were isolated for this study are rural and valid for comparison purposes. Close inspection of the maps and data for each cluster shows that some Consolidated clusters are close to large urban centers – Ohio Germantown, Pennsylvania Southwest, Washington YCOM. Although these three areas are rural, they are slightly more suburban in nature and the Consolidated Census tracts are more densely populated than the surrounding areas of the nearby Price Cap carriers where the Census Tracts do not intersect with the urbanized areas.

Analysis of Demographic Data

Of the total 211 tracts identified as Consolidated tracts in this study, 139 completely overlap with Price Cap tracts and, therefore, share all identifiable market characteristics including population and housing density and competitive alternatives. Six of the 20 Consolidated areas are entirely within Census tracts also served by Price Cap carriers. Only three Consolidated areas share less than 50% of their Census Tracts with Price Cap carriers.

The Consolidated areas of Florida Panhandle, Maine Community Service, Missouri, New York Areas (Eastern and Chautauqua), Northwest Ohio, Oklahoma Chouteau Tel, and Washington Ellensburg Tel are surrounded by Price Cap carrier rural areas with similar population and housing densities. The Minnesota Southern, Ohio Southwest Germantown, Pennsylvania Southwest, and Washington YCOM areas of Consolidated have significantly higher population and housing densities than the surrounding Price Cap rural areas.

Illinois Northern and Odin Tel areas and Ohio Northeast are roughly half as densely populated as the surrounding rural areas of the Price Cap companies. These are also areas where the all Census Tracts within the Consolidated areas completely overlap the Price Cap areas. In the Mutual Tel area of Virginia and Ohio Northwest, the Consolidated area is significantly lower in density compared to the surrounding

Price Cap tracts. In both of these cases the Price Cap rural areas include, respectively, more than 29 and 15 times the number of tracts than the corresponding Consolidated ROR areas, which may result in distortions.

All other Consolidated and surrounding Price Cap rural areas have such low population counts that they cannot be compared by percentage. The extremely low density, however, makes them directly comparable in terms of absolute results.

Analysis of Competitive Alternatives

When looking at Consolidated ROR markets as a whole, the data show that the percentage of Census blocks in Consolidated tracts with cable service (21%) is similar to the surrounding rural price cap tracts (28%). These figures reflect the limited deployment of cable service in rural areas across the country. Even when viewed as individual markets, the differences are not large – generally less than 15 percentage points. Looking at which markets have higher availability - Consolidated ROR or Price Cap rural tracts - we find even that is split equally: the percentage of blocks served with business cable in Consolidated tracts is higher in 9 markets, less than the availability in Price Cap areas in 9 other markets and within a few percentage points in the final 2 markets.

What this study shows is that although there are some inconsistencies in broadband cable availability for individual markets, there is nothing to indicate a major difference in availability between rural price cap tracts and Consolidated ROR study areas as a whole.

For fiber availability, the numbers in our report also vary by market but are generally very low – on average 10% of blocks in Price Cap Non-Urbanized Area tracts have fiber compared to 5% in Consolidated ROR tracts. Our study shows that urban Price Cap areas and Consolidated ROR areas are similar in their limited availability of fiber broadband services.

Summary and Conclusion

The results of this study confirm that there are no convincing differences between the Consolidated Rate of Return study areas and adjacent rural areas served by Price Cap carriers. Both areas have similar demographic and competitive conditions overall.

Consolidated's ROR study areas are all adjacent to rural Price Cap study areas. In most cases they are completely surrounded by the price cap study areas and exist in a sea of Price Cap markets. While rural areas vary widely from one area of the country to another, this study shows that the areas on both sides of a shared exchange or study area boundary are very similar. In six of the 20 Consolidated ROR study areas, 100% of the Census tracts associated with Consolidated also intersect with a Price Cap area. Only three clusters have less than 50% overlap. The average overlap is greater than 76% - in other words, more than two-thirds of the Census tracts in Consolidated areas are not just similar to the tracts of nearby rural Price Cap areas, they are demographically identical.

The demographic data show that population density and housing density of rural ROR study areas and the surrounding Price Cap study areas are very comparable across the 20 areas. The following maps illustrate that differences are only exaggerated where the nearby urbanized area influences the population distribution – e.g. suburbs and exurbs. A survey by cluster indicates that in seven cluster areas the Price Cap tracts have more population density; in five areas the Consolidated ROR tracts are more densely populated; and the remaining eight are extremely close. On an overall basis, the average population density of the Consolidated tracts is approximately 20 per square mile and of Price Cap rural tracts is 34 per square mile. Compared to the average density of 458 per square mile for nearby urbanized areas, both types of LECs are strikingly close with respect to population density. In comparing the 2010 Census to the 2016 ACS estimates, the rate of population and housing growth in both the Consolidated ROR tracts and the Price Cap rural tracts is equally flat.

Across the 20 clusters in this report, the competitive cable data show that business cable is available in 28.66% of the Census blocks in the rural Price Cap carrier tracts and in 21.58% of the Consolidated ROR tracts. Business fiber is available in 10.52% of blocks in Price Cap tracts and 4.49% in Consolidated ROR tracts. The availability of both cable and fiber is related more to the proximity of urbanized areas than it is to the regulatory status of the local telephone company.

The overall characteristics of the Consolidated ROR study areas with respect to population and housing density and competitive alternatives are comparable to the surrounding rural Price Cap markets. This consistency between market areas warrants consideration of similar regulatory treatment for business data services (BDS), which may stimulate greater penetration of broadband services for both residential and business customers.

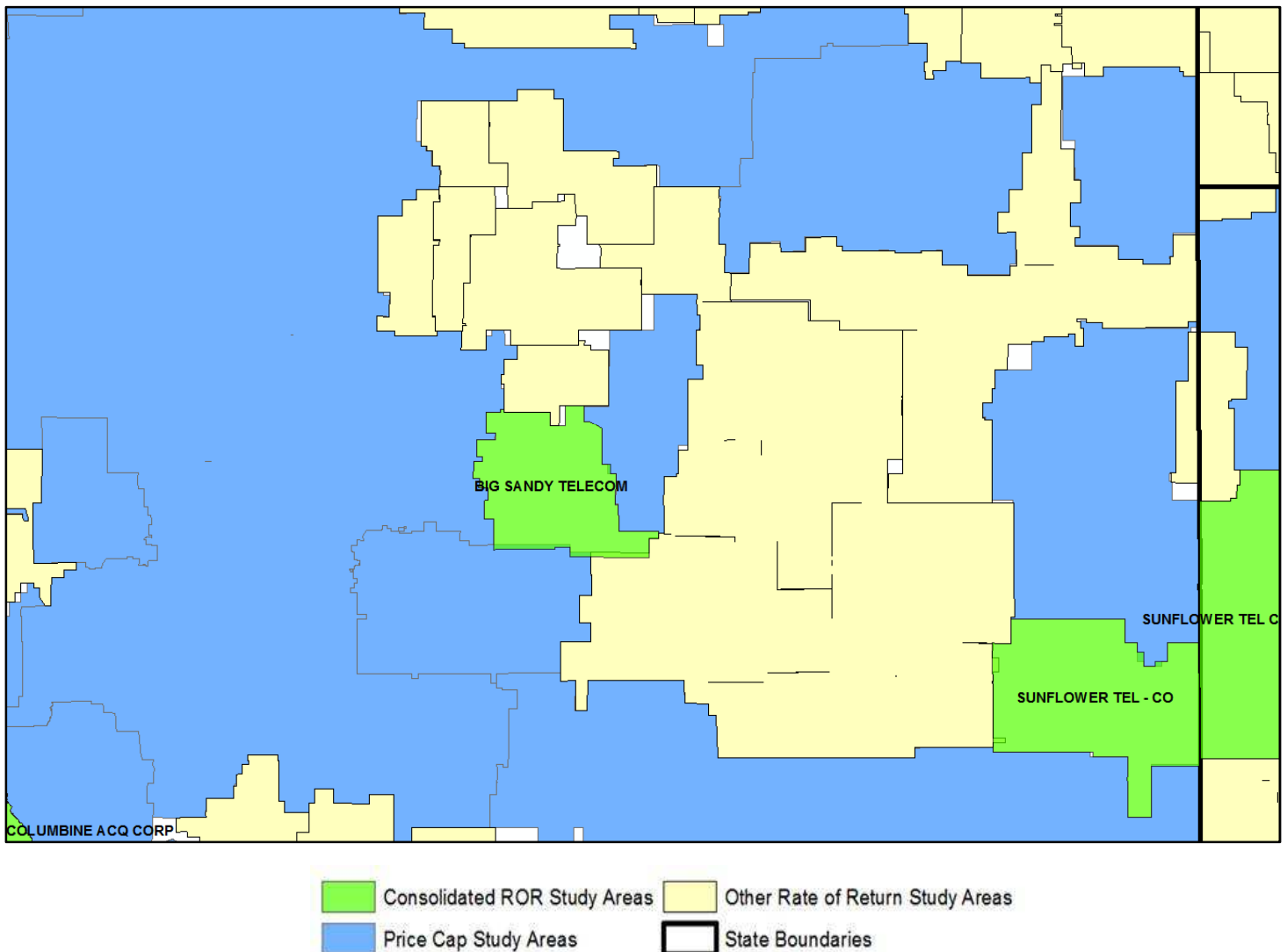
Demographic and Competitive Data for Consolidated ROR Markets

Colorado – Big Sandy

Includes the following Rate of Return Consolidated Communications ILECs:

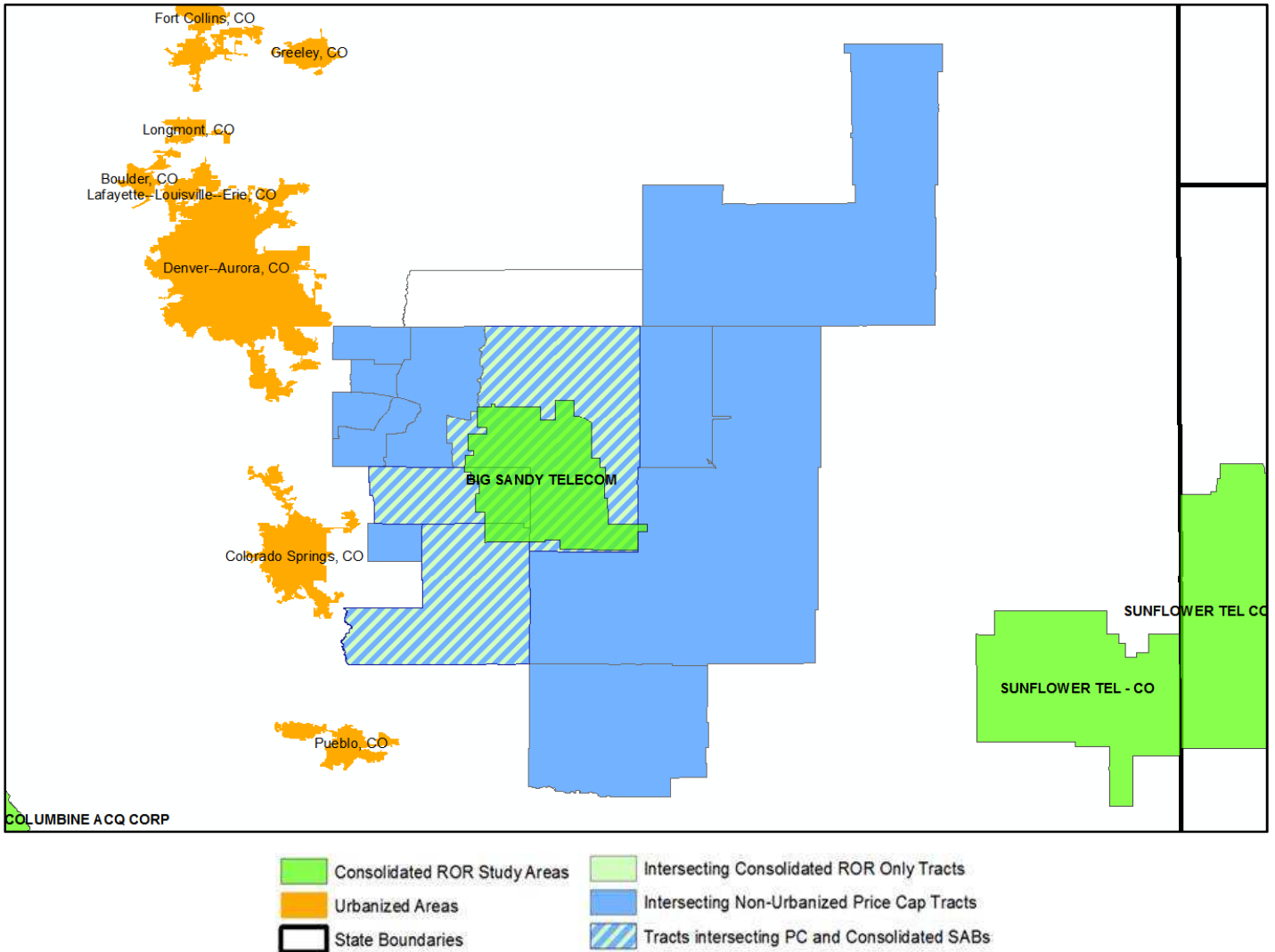
State	Company Name	SAC
CO	BIG SANDY TELECOM	462192

Study Area Boundaries



Colorado – Big Sandy, cont'd.

Study Area and 25 Mile Radius Rural Tracts



Demographic Comparison

Category	Number of Tracts in Category	Category Land Area in Square Miles	2010 Census Population	2016 ACS Population Estimate	2010 Census Housing Units	2016 ACS Housing Units Estimate	2010 Census Population Density	2016 ACS Population Est Density	2010 Census Housing Units Density	2016 ACS Housing Units Est Density
PC Non-Urbanized Area Tracts	13	8053	48086	48296	18872	18565	5.97	6.00	2.34	2.31
Consolidated ROR Tracts	3	2175	12834	12871	5454	5478	5.90	5.92	2.51	2.52
Overlapping ROR & PC Tracts	3	2175	12834	12871	5454	5478	5.90	5.92	2.51	2.52

Business Broadband Competition

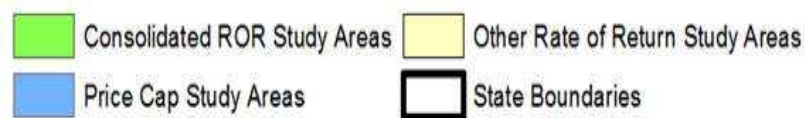
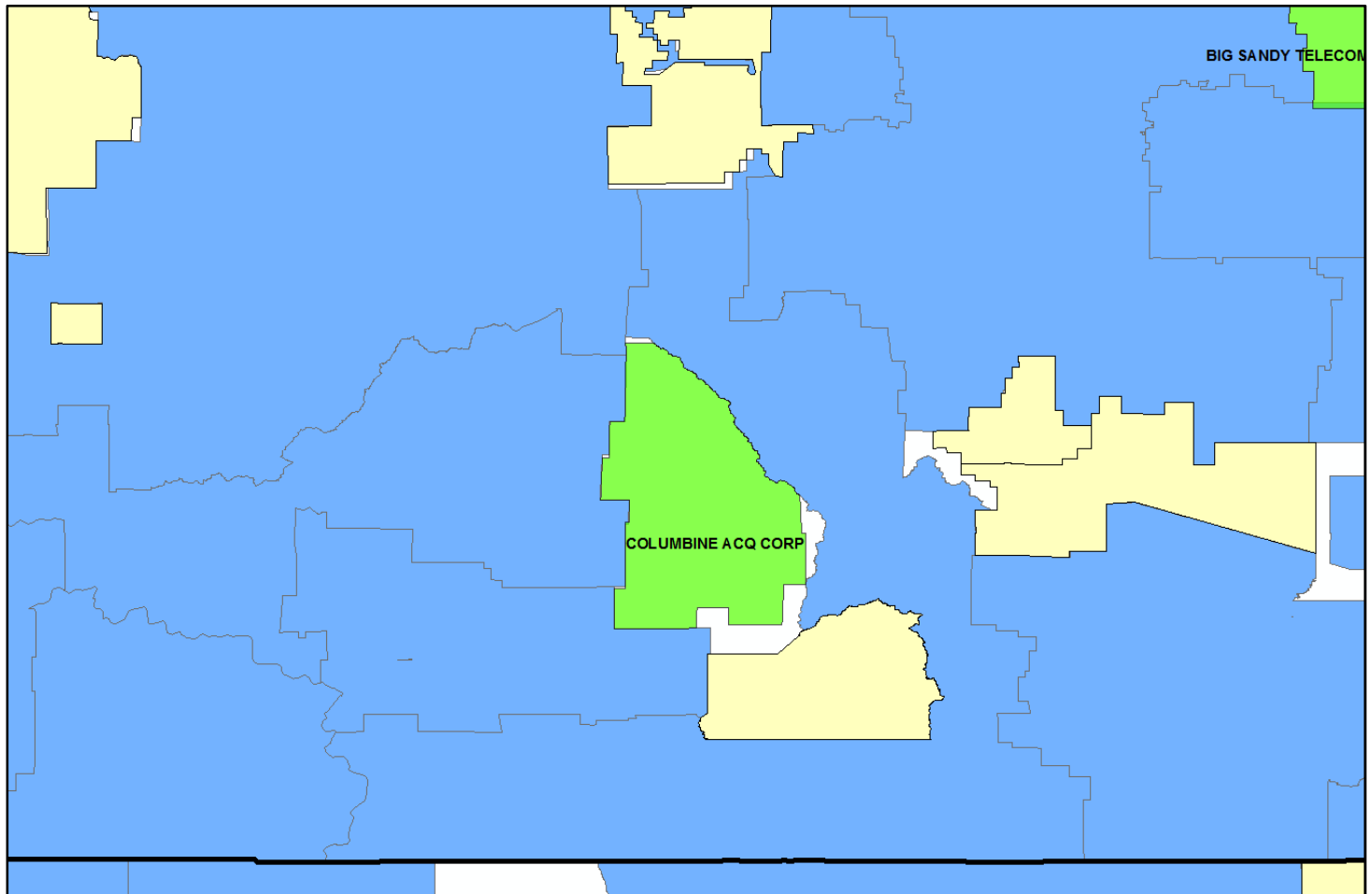
Category	Number of Tracts in Category	Number of Blocks in Category	Number of Tracts with Business Cable Service Offered	Number of Blocks with Business Cable Service Offered	Number of Tracts with Business Fiber Service Offered	Number of Blocks with Business Fiber Service Offered	Percent of Blocks with Business Cable Service Offered	Percent of Blocks with Business Fiber Service Offered
PC Non-Urbanized Area Tracts	13	5054	7	196	10	240	3.88%	4.75%
Consolidated ROR Tracts	3	1420	1	1	3	17	0.07%	1.20%
Overlapping ROR & PC Tracts	3	1420	1	1	3	17	0.07%	1.20%

Colorado – Columbine

Includes the following Rate of Return Consolidated Communications ILECs:

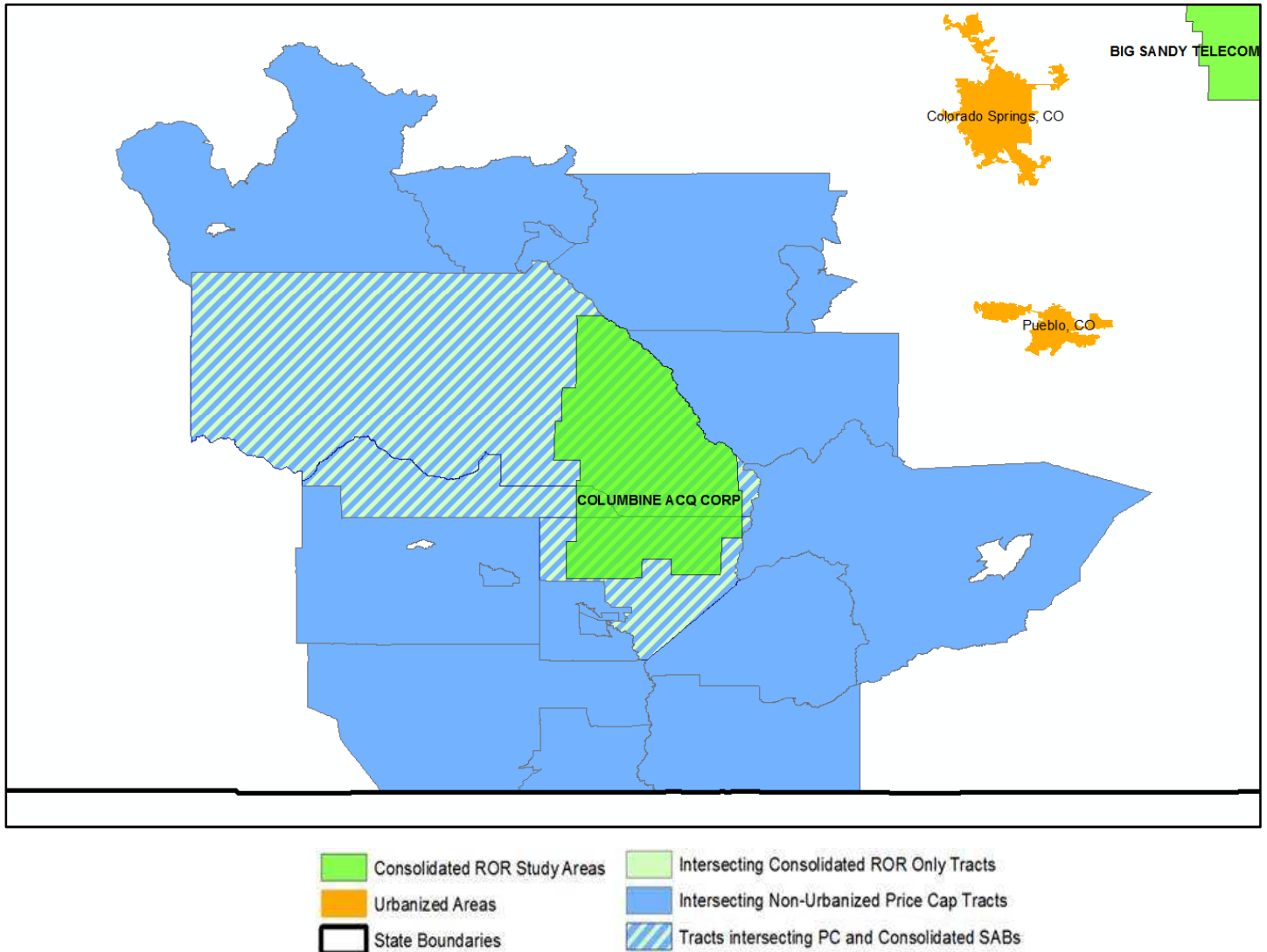
State	Company Name	SAC
CO	COLUMBINE ACQ CORP	462204

Study Area Boundaries



Colorado – Columbine, cont'd.

Study Area and 25 Mile Radius Rural Tracts



Demographic Comparison

Category	Number of Tracts in Category	Category Land Area in Square Miles	2010 Census Population	2016 ACS Population Estimate	2010 Census Housing Units	2016 ACS Housing Units Estimate	2010 Census Population Density	2016 ACS Population Est. Density	2010 Census Housing Units Density	2016 ACS Housing Units Est Density
PC Non-Urbanized Area Tracts	20	12429	69843	71042	42414	43494	5.62	5.72	3.41	3.50
Consolidated ROR Tracts	3	3705	7883	7802	4728	4751	2.13	2.11	1.28	1.28
Overlapping ROR & PC Tracts	3	3705	7883	7802	4728	4751	2.13	2.11	1.28	1.28

Business Broadband Competition

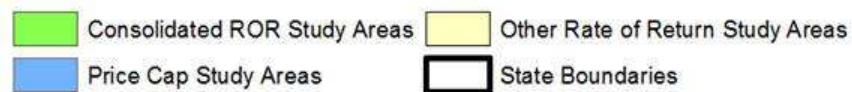
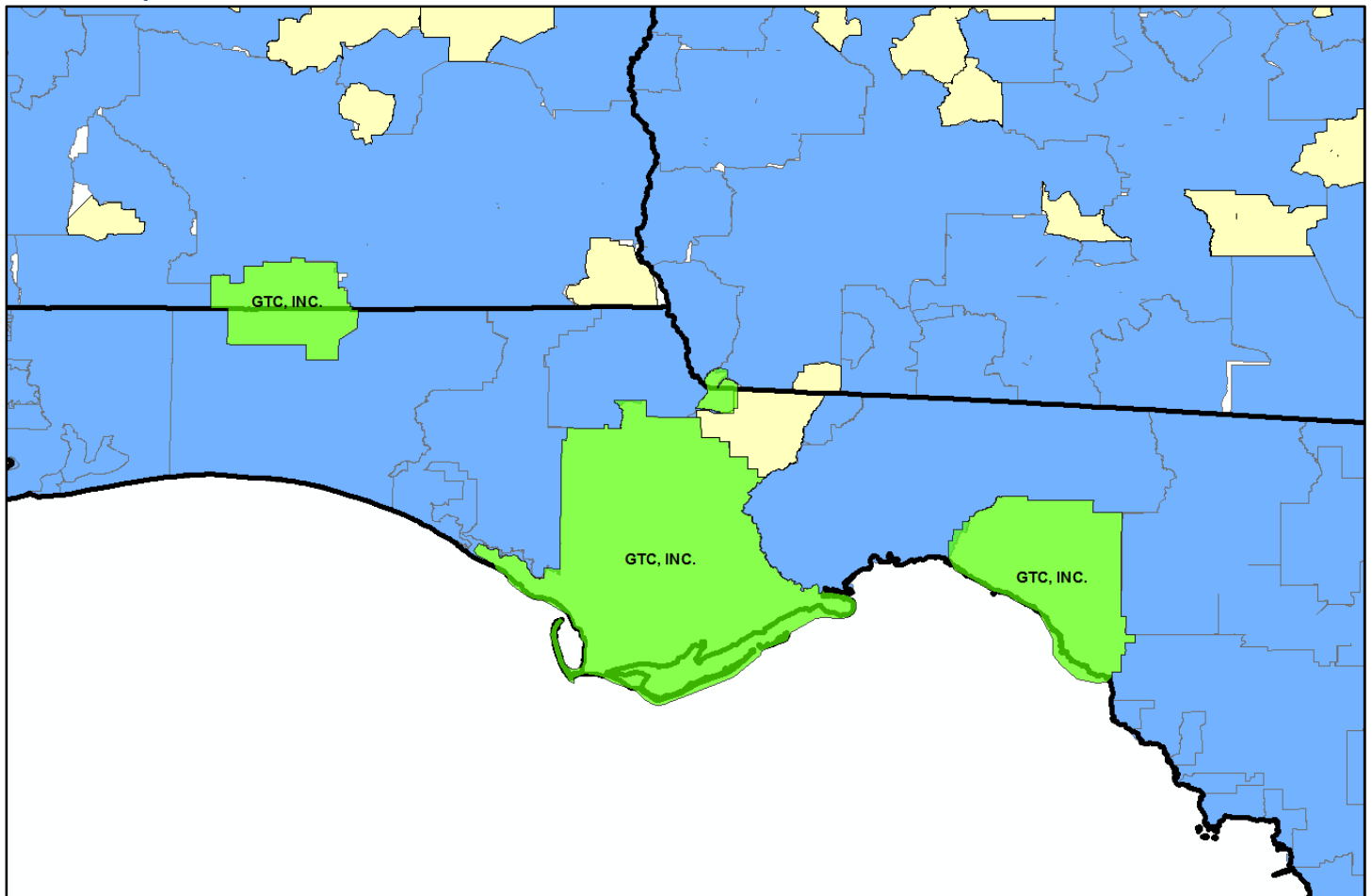
Category	Number of Tracts in Category	Number of Blocks in Category	Number of Tracts with Business Cable Service Offered	Number of Blocks with Business Cable Service Offered	Number of Tracts with Business Fiber Service Offered	Number of Blocks with Business Fiber Service Offered	Percent of Blocks with Business Cable Service Offered	Percent of Blocks with Business Fiber Service Offered
PC Non-Urbanized Area Tracts	20	14381	11	1540	16	966	10.71%	6.72%
Consolidated ROR Tracts	3	2221	0	0	3	17	0.00%	0.77%
Overlapping ROR & PC Tracts	3	2221	0	0	3	17	0.00%	0.77%

Florida Panhandle

Includes the following Rate of Return Consolidated Communications ILECs:

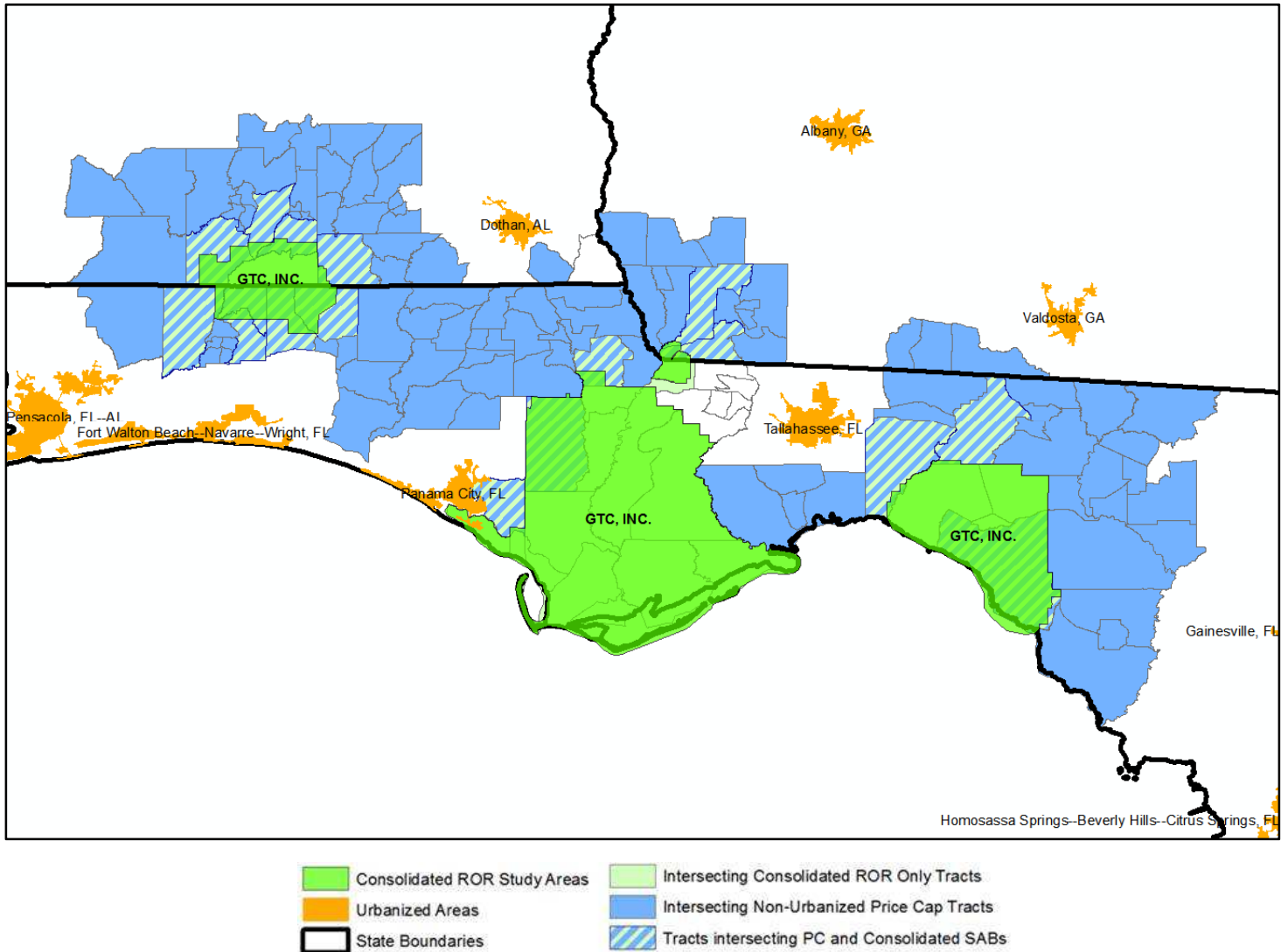
State	Company Name	SAC
FL	GTC, INC.	210291
FL	GTC, INC.	210329
FL	GTC, INC.	210339

Study Area Boundaries



Florida Panhandle, cont'd.

Study Area and 25 Mile Radius Rural Tracts



Demographic Comparison

Category	Number of Tracts in Category	Category Land Area in Square Miles	2010 Census Population	2016 ACS Population Estimate	2010 Census Housing Units	2016 ACS Housing Units Estimate	2010 Census Population Density	2016 ACS Population Est Density	2010 Census Housing Units Density	2016 ACS Housing Units Est Density
PC Non-Urbanized Area Tracts	113	13034	485000	489473	220025	220442	37.21	37.55	16.88	16.91
Consolidated ROR Tracts	35	6282	147435	146133	72913	72898	23.47	23.26	11.61	11.60
Overlapping ROR & PC Tracts	17	3300	72918	72074	34144	34518	22.10	21.84	10.35	10.46

Business Broadband Competition

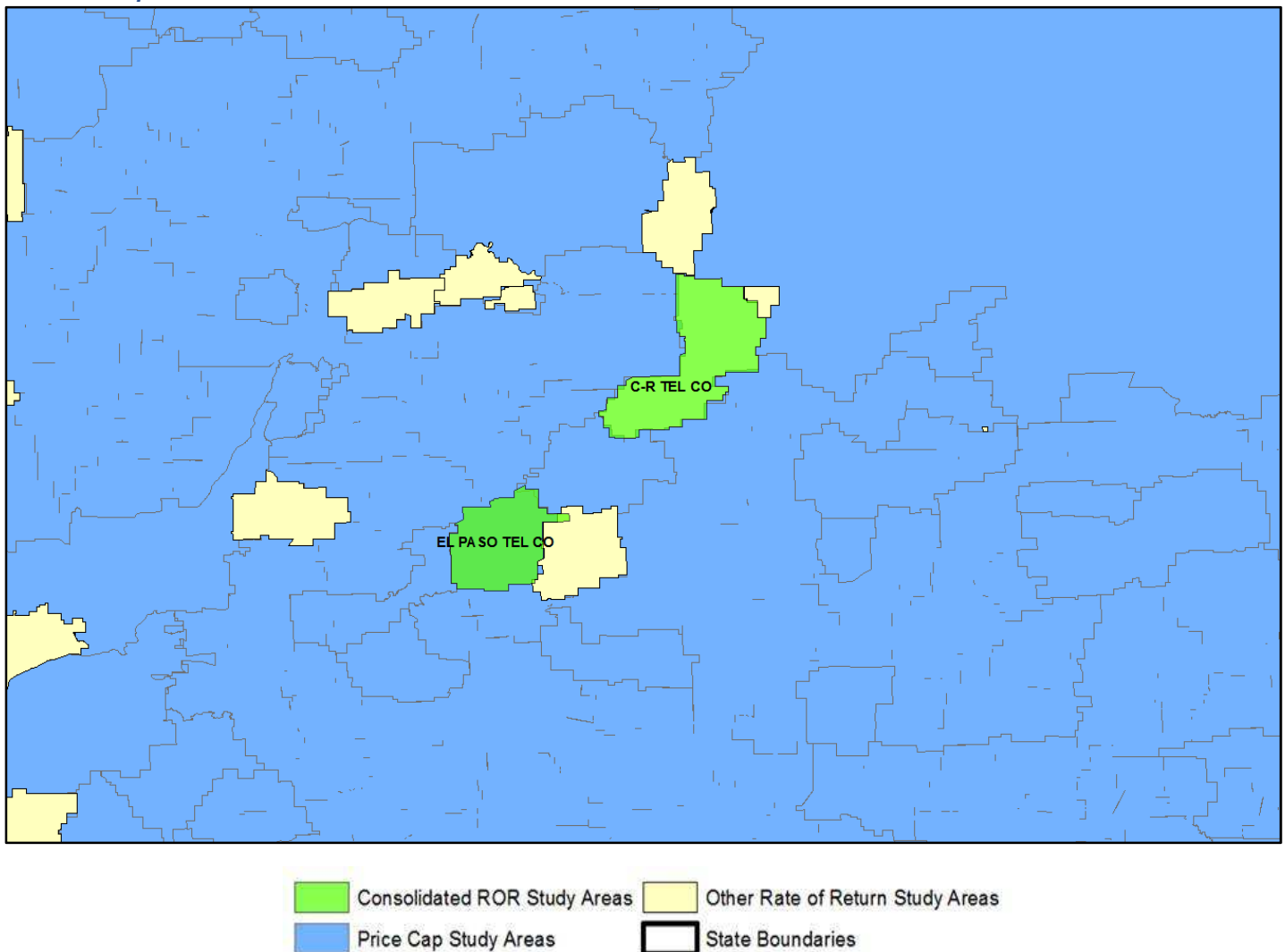
Category	Number of Tracts in Category	Number of Blocks in Category	Number of Tracts with Business Cable Service Offered	Number of Blocks with Business Cable Service Offered	Number of Tracts with Business Fiber Service Offered	Number of Blocks with Business Fiber Service Offered	Percent of Blocks with Business Cable Service Offered	Percent of Blocks with Business Fiber Service Offered
PC Non-Urbanized Area Tracts	113	38647	96	7095	64	1001	18.36%	2.59%
Consolidated ROR Tracts	35	18045	26	3007	21	341	16.66%	1.89%
Overlapping ROR & PC Tracts	17	8061	13	834	8	54	10.35%	0.67%

Northern Illinois

Includes the following Rate of Return Consolidated Communications ILECs:

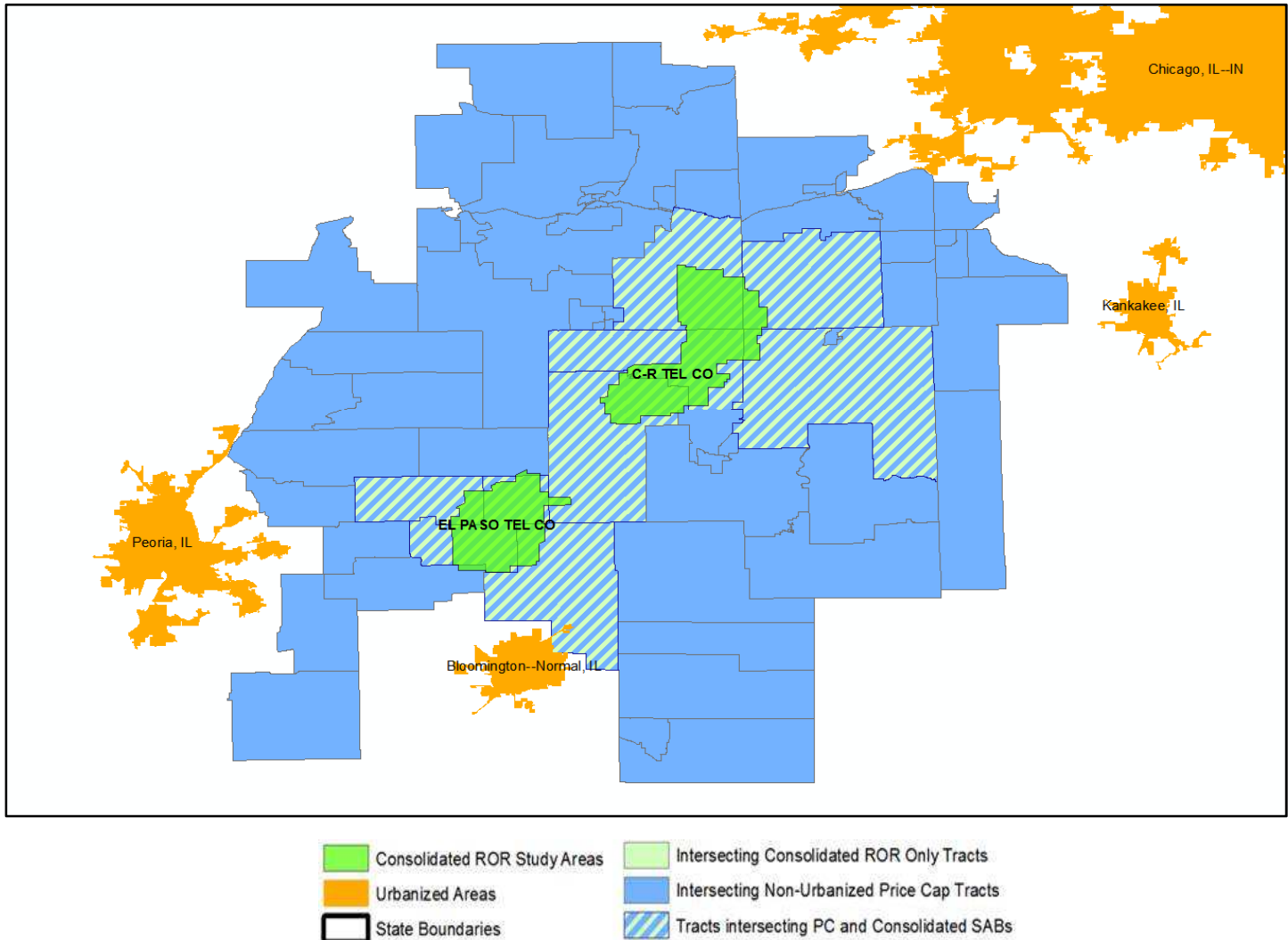
State	Company Name	SAC
IL	EL PASO TEL CO	341004
IL	C-R TEL CO	341009

Study Area Boundaries



Northern Illinois, cont'd.

Study Area and 25 Mile Radius Rural Tracts



Demographic Comparison

Category	Number of Tracts in Category	Category Land Area in Square Miles	2010 Census Population	2016 ACS Population Estimate	2010 Census Housing Units	2016 ACS Housing Units Estimate	2010 Census Population Density	2016 ACS Population Est Density	2010 Census Housing Units Density	2016 ACS Housing Units Est Density
PC Non-Urbanized Area Tracts	63	4398	241223	237968	103063	103371	54.85	54.11	23.43	23.50
Consolidated ROR Tracts	8	1200	34151	32976	13991	13694	28.46	27.48	11.66	11.41
Overlapping ROR & PC Tracts	8	1200	34151	32976	13991	13694	28.46	27.48	11.66	11.41

Business Broadband Competition

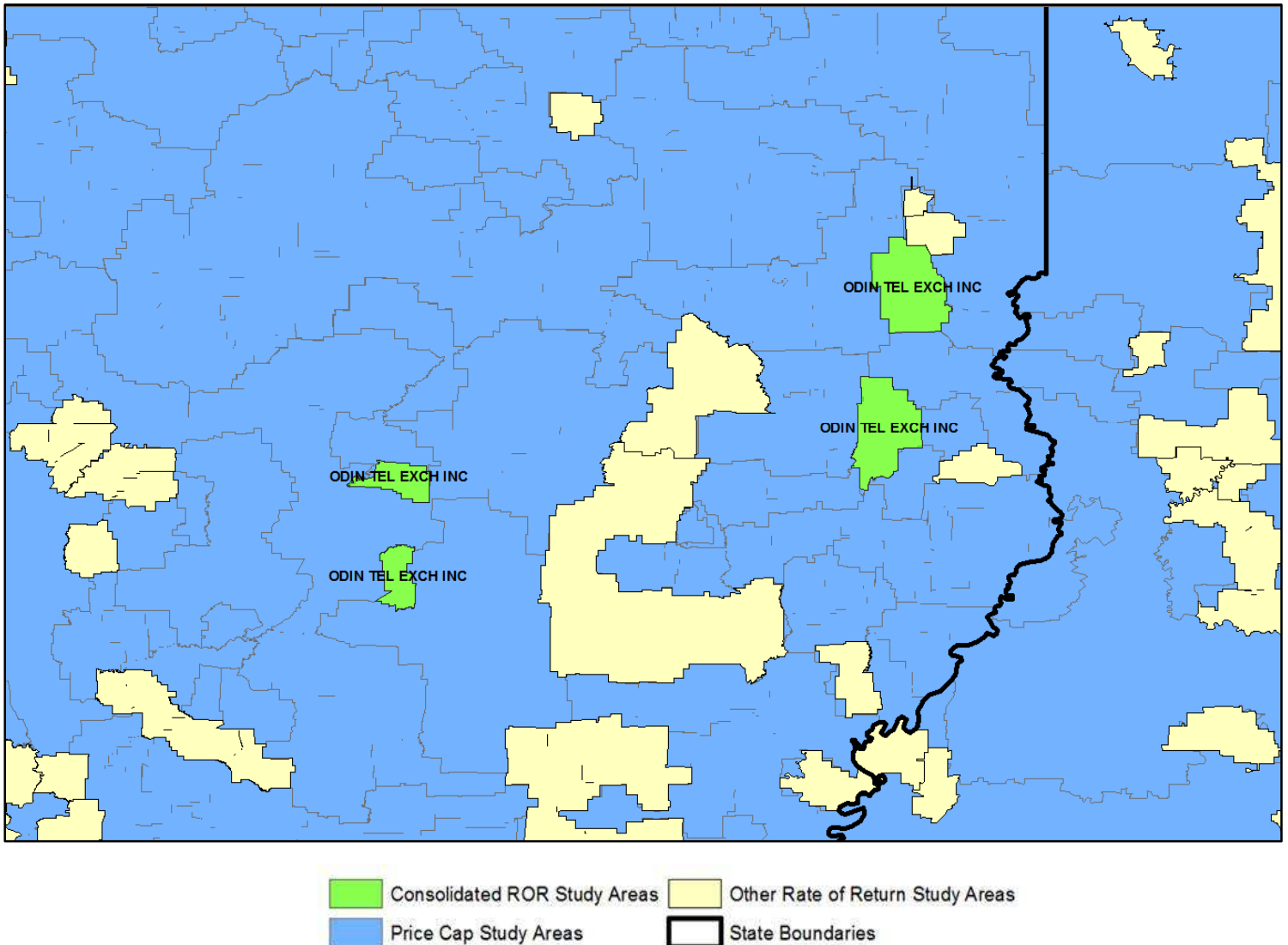
Category	Number of Tracts in Category	Number of Blocks in Category	Number of Tracts with Business Cable Service Offered	Number of Blocks with Business Cable Service Offered	Number of Tracts with Business Fiber Service Offered	Number of Blocks with Business Fiber Service Offered	Percent of Blocks with Business Cable Service Offered	Percent of Blocks with Business Fiber Service Offered
PC Non-Urbanized Area Tracts	63	22515	62	7027	34	5920	31.21%	26.29%
Consolidated ROR Tracts	8	4918	8	880	7	812	17.89%	16.51%
Overlapping ROR & PC Tracts	8	4918	8	880	7	812	17.89%	16.51%

Illinois – Odin Tel

Includes the following Rate of Return Consolidated Communications ILECs:

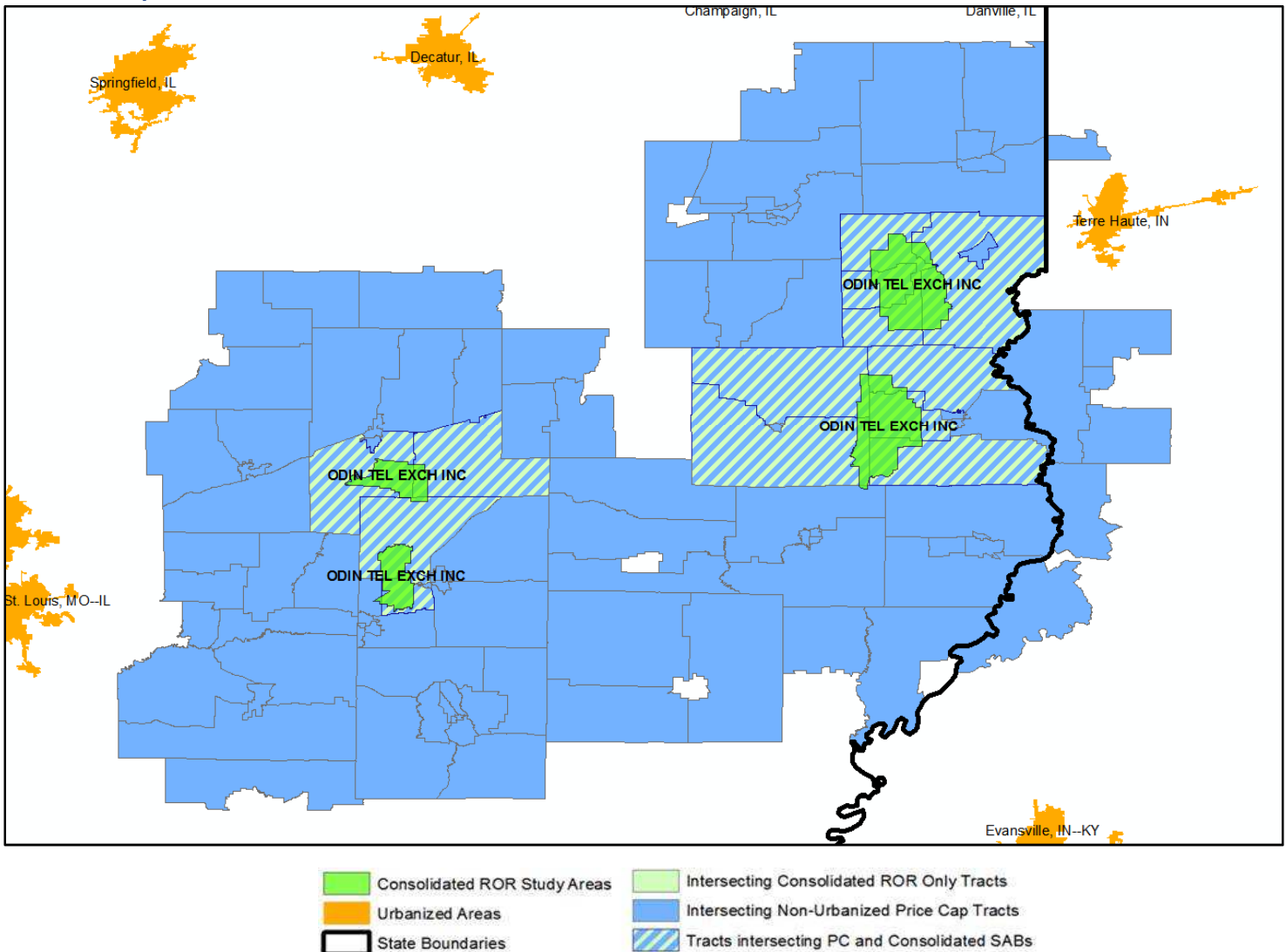
State	Company Name	SAC
IL	ODIN TEL EXCH INC	341065

Study Area Boundaries



Illinois – Odin Tel, cont'd.

Study Area and 25 Mile Radius Rural Tracts



Demographic Comparison

Category	Number of Tracts in Category	Category Land Area in Square Miles	2010 Census Population	2016 ACS Population Estimate	2010 Census Housing Units	2016 ACS Housing Units Estimate	2010 Census Population Density	2016 ACS Population Est Density	2010 Census Housing Units Density	2016 ACS Housing Units Est Density
PC Non-Urbanized Area Tracts	107	9996	397000	391446	173239	172379	39.72	39.16	17.33	17.24
Consolidated ROR Tracts	12	1856	39064	39265	17647	17677	21.05	21.16	9.51	9.52
Overlapping ROR & PC Tracts	12	1856	39064	39265	17647	17677	21.05	21.16	9.51	9.52

Business Broadband Competition

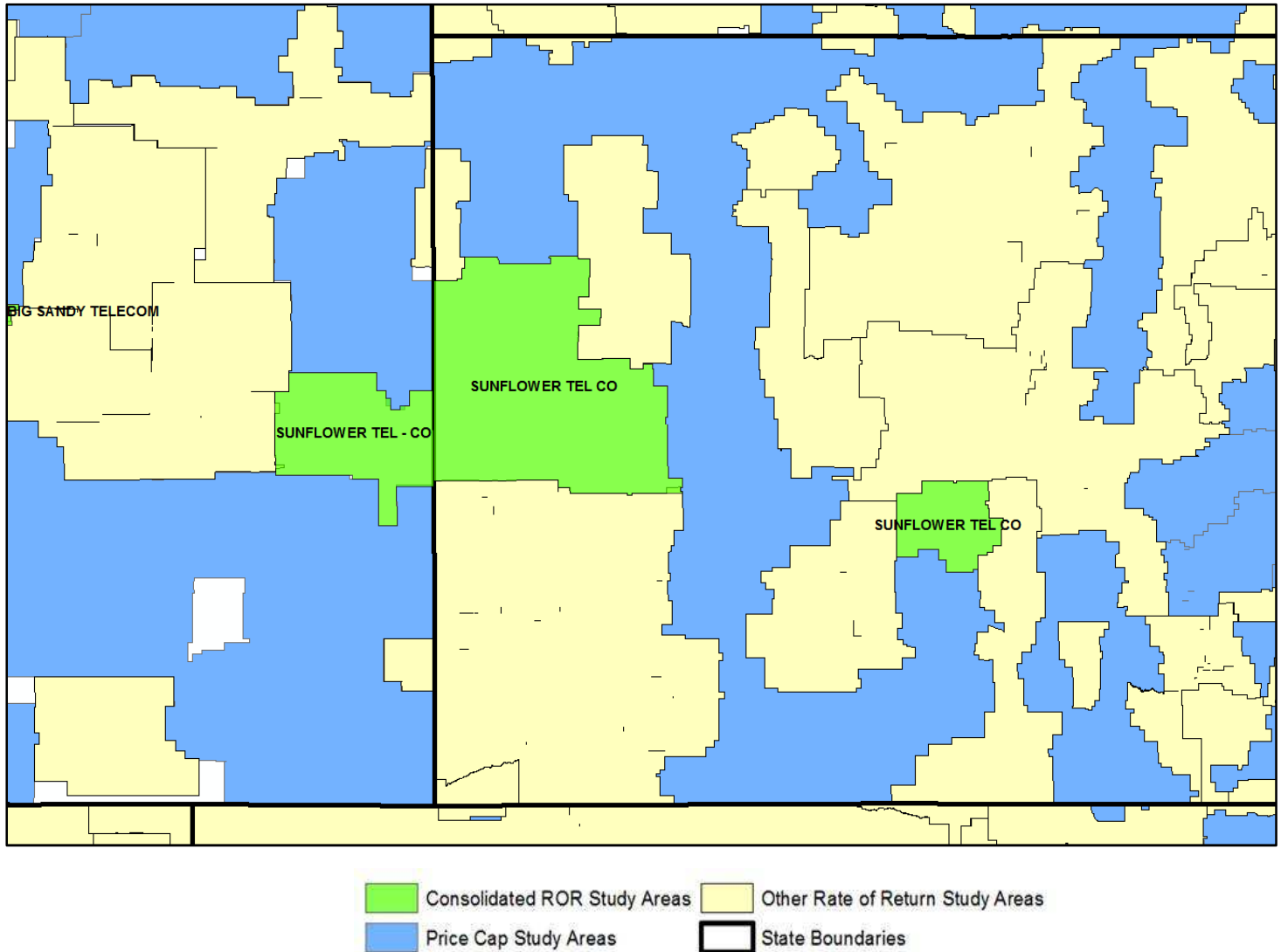
Category	Number of Tracts in Category	Number of Blocks in Category	Number of Tracts with Business Cable Service Offered	Number of Blocks with Business Cable Service Offered	Number of Tracts with Business Fiber Service Offered	Number of Blocks with Business Fiber Service Offered	Percent of Blocks with Business Cable Service Offered	Percent of Blocks with Business Fiber Service Offered
PC Non-Urbanized Area Tracts	107	41749	102	11626	68	2513	27.85%	6.02%
Consolidated ROR Tracts	12	5910	11	866	5	81	14.65%	1.37%
Overlapping ROR & PC Tracts	12	5910	11	866	5	81	14.65%	1.37%

Kansas & Colorado – Sunflower Telco

Includes the following Rate of Return Consolidated Communications ILECs:

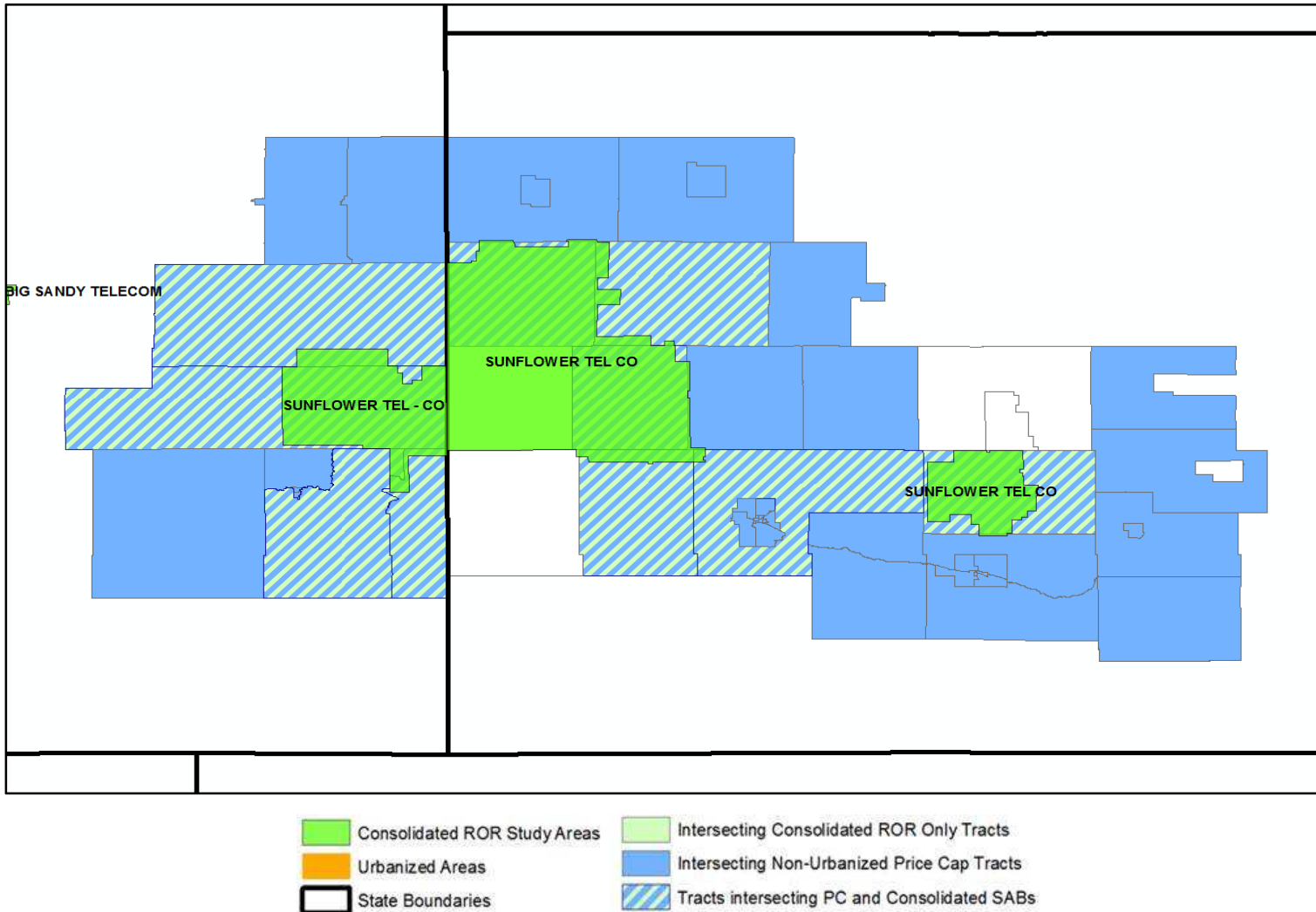
State	Company Name	SAC
CO	SUNFLOWER TEL - CO	461835
KS	SUNFLOWER TEL - CO	411835

Study Area Boundaries



Kansas & Colorado – Sunflower Telco, cont'd.

Study Area and 25 Mile Radius Rural Tracts



Demographic Comparison

Category	Number of Tracts in Category	Category Land Area in Square Miles	2010 Census Population	2016 ACS Population Estimate	2010 Census Housing Units	2016 ACS Housing Units Estimate	2010 Census Population Density	2016 ACS Population Est Density	2010 Census Housing Units Density	2016 ACS Housing Units Est Density
PC Non-Urbanized Area Tracts	48	22540	148402	148423	61084	61224	6.58	6.58	2.71	2.72
Consolidated ROR Tracts	11	11411	24778	25154	11506	11549	2.17	2.20	1.01	1.01
Overlapping ROR & PC Tracts	10	10633	23531	23919	10877	10936	2.21	2.25	1.02	1.03

Business Broadband Competition

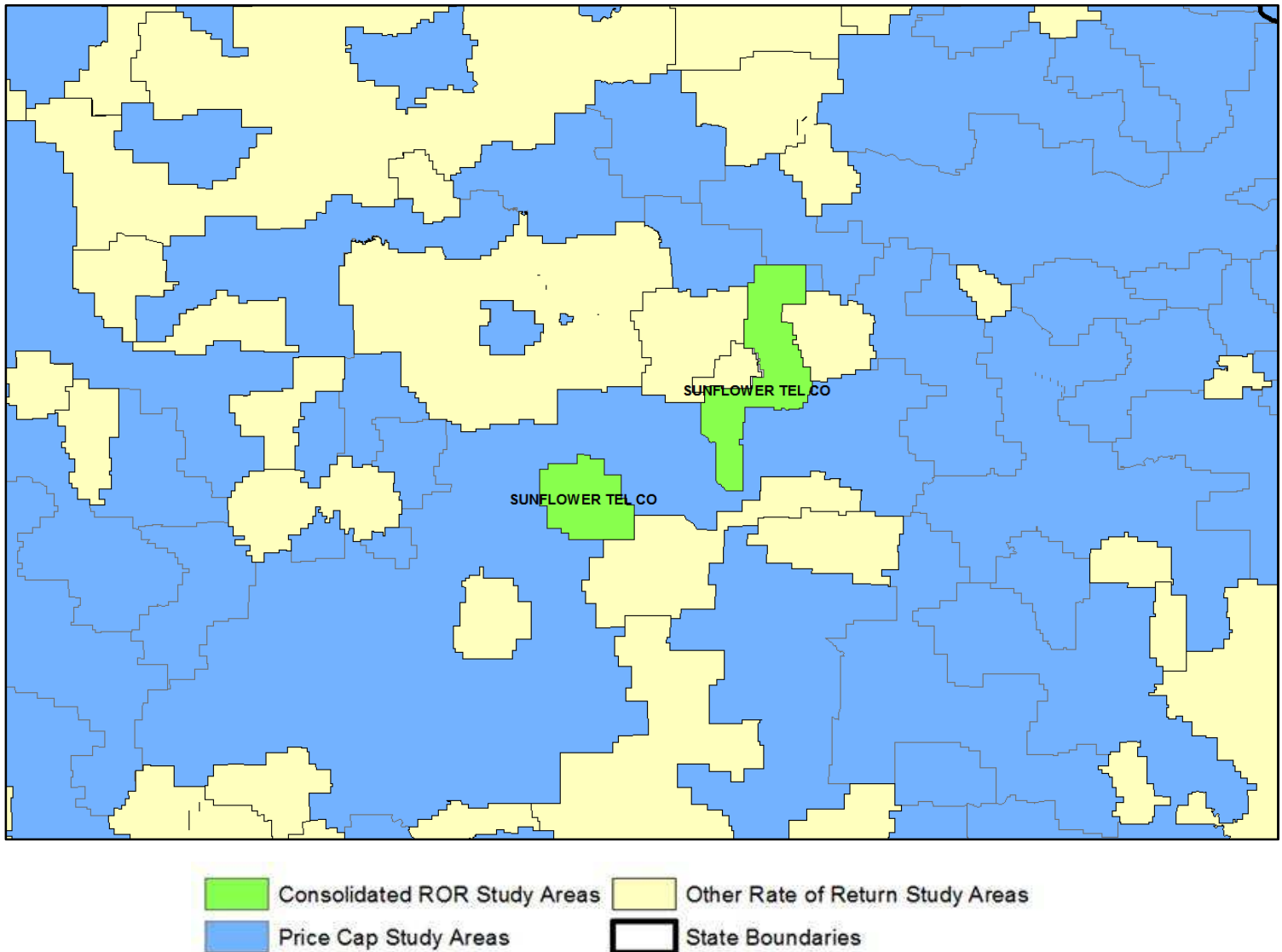
Category	Number of Tracts in Category	Number of Blocks in Category	Number of Tracts with Business Cable Service Offered	Number of Blocks with Business Cable Service Offered	Number of Tracts with Business Fiber Service Offered	Number of Blocks with Business Fiber Service Offered	Percent of Blocks with Business Cable Service Offered	Percent of Blocks with Business Fiber Service Offered
PC Non-Urbanized Area Tracts	48	28378	35	3646	45	4350	12.85%	15.33%
Consolidated ROR Tracts	11	9152	7	1032	9	1022	11.28%	11.17%
Overlapping ROR & PC Tracts	10	8451	6	823	9	1022	9.74%	12.09%

Eastern Kansas - Sunflower Telco

Includes the following Rate of Return Consolidated Communications ILECs:

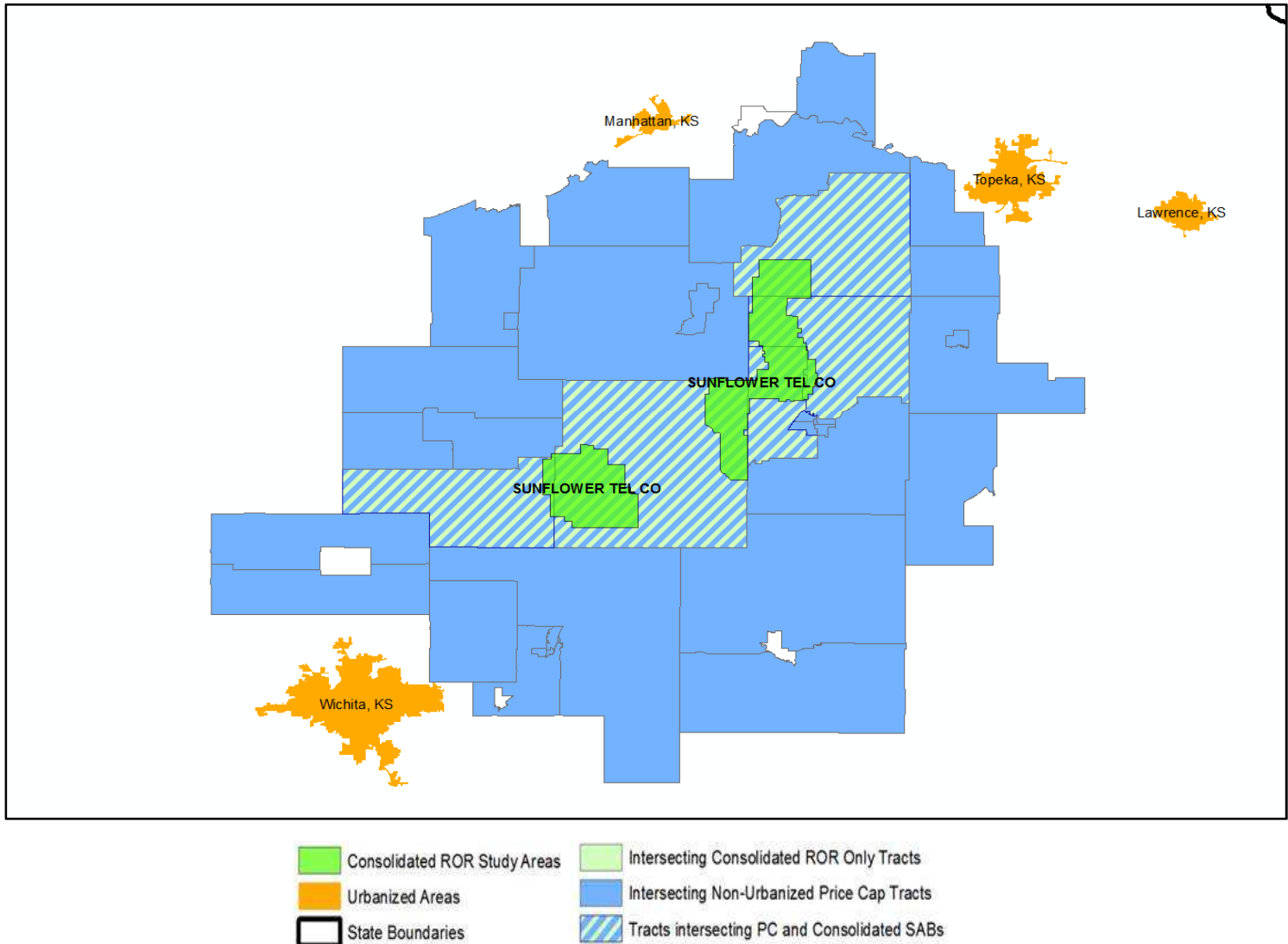
State	Company Name	SAC
KS	SUNFLOWER TEL - CO	411835

Study Area Boundaries



Eastern Kansas - Sunflower Telco, cont'd.

Study Area and 25 Mile Radius Rural Tracts



Demographic Comparison

Category	Number of Tracts in Category	Category Land Area in Square Miles	2010 Census Population	2016 ACS Population Estimate	2010 Census Housing Units	2016 ACS Housing Units Estimate	2010 Census Population Density	2016 ACS Population Est Density	2010 Census Housing Units Density	2016 ACS Housing Units Est Density
PC Non-Urbanized Area Tracts	36	8300	141125	139893	62882	63192	17.00	16.85	7.58	7.61
Consolidated ROR Tracts	5	2037	14542	13995	6947	6980	7.14	6.87	3.41	3.43
Overlapping ROR & PC Tracts	5	2037	14542	13995	6947	6980	7.14	6.87	3.41	3.43

Business Broadband Competition

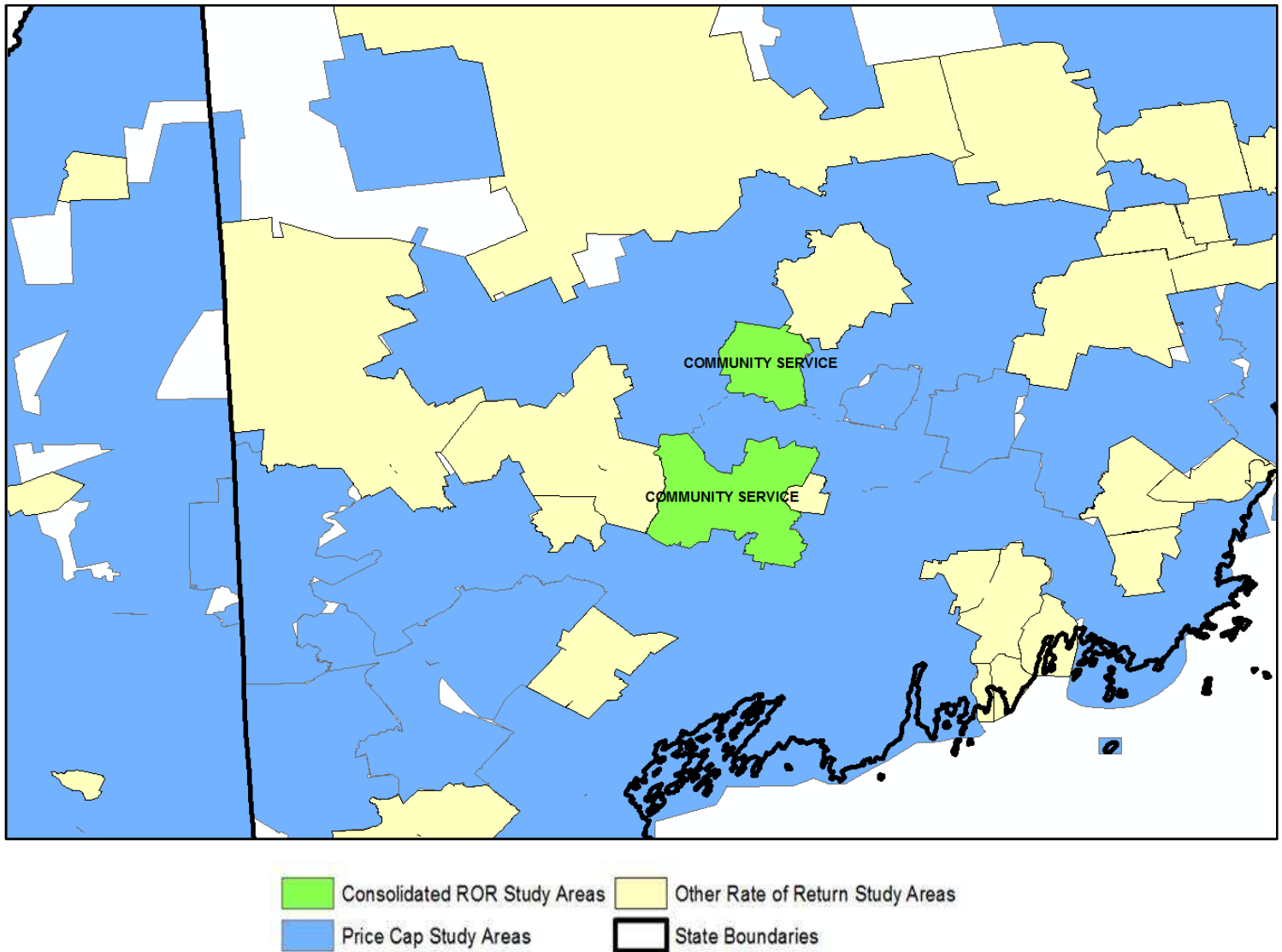
Category	Number of Tracts in Category	Number of Blocks in Category	Number of Tracts with Business Cable Service Offered	Number of Blocks with Business Cable Service Offered	Number of Tracts with Business Fiber Service Offered	Number of Blocks with Business Fiber Service Offered	Percent of Blocks with Business Cable Service Offered	Percent of Blocks with Business Fiber Service Offered
PC Non-Urbanized Area Tracts	36	23888	32	2463	31	5869	10.31%	24.57%
Consolidated ROR Tracts	5	4993	3	183	5	307	3.67%	6.15%
Overlapping ROR & PC Tracts	5	4993	3	183	5	307	3.67%	6.15%

Maine – Community Service

Includes the following Rate of Return Consolidated Communications ILECs:

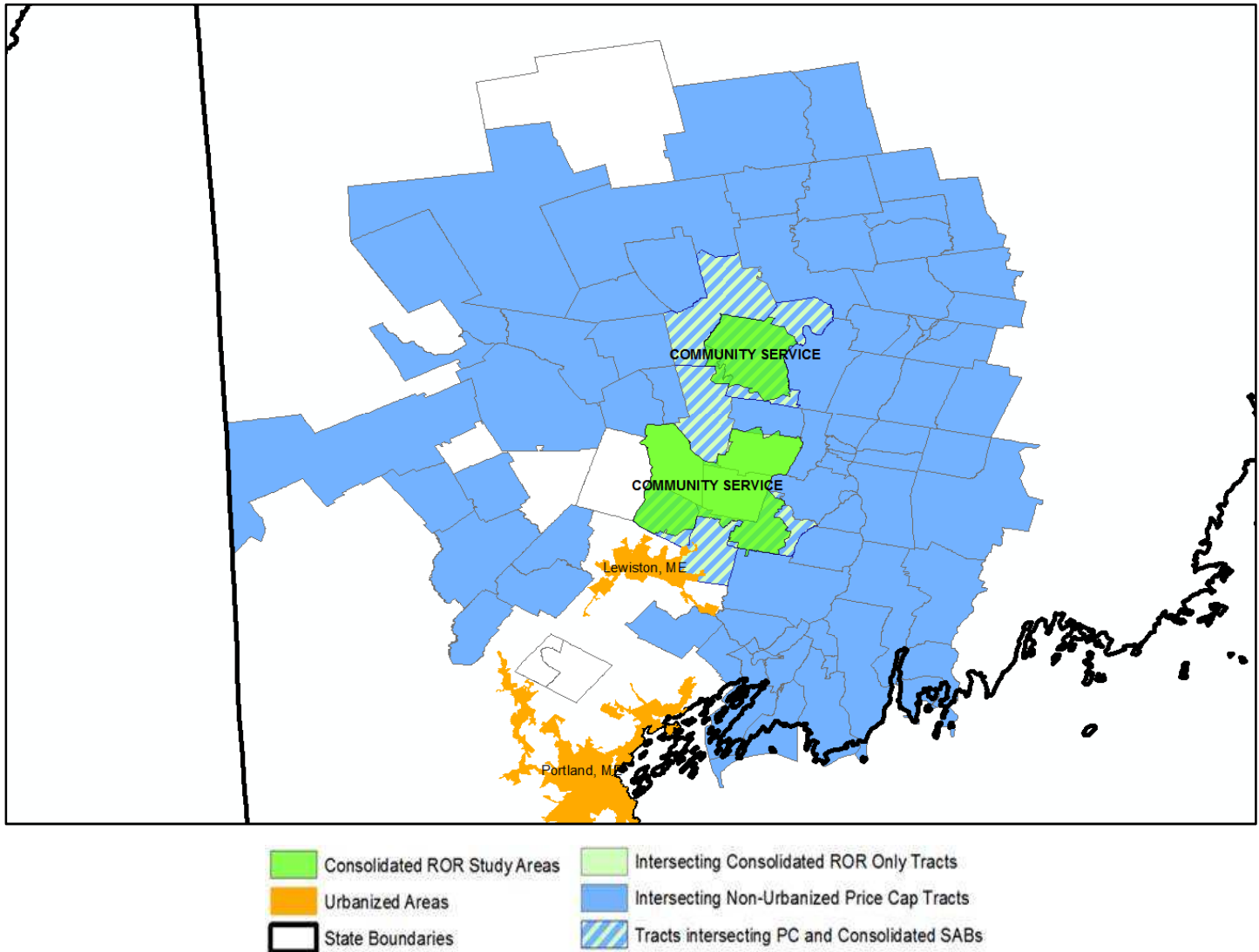
State	Company Name	SAC
ME	COMMUNITY SERVICE	100015

Study Area Boundaries



Maine – Community Service, cont'd.

Study Area and 25 Mile Radius Rural Tracts



Demographic Comparison

Category	Number of Tracts in Category	Category Land Area in Square Miles	2010 Census Population	2016 ACS Population Estimate	2010 Census Housing Units	2016 ACS Housing Units Estimate	2010 Census Population Density	2016 ACS Population Est Density	2010 Census Housing Units Density	2016 ACS Housing Units Est Density
PC Non-Urbanized Area Tracts	77	3657	308662	307466	164002	163989	84.40	84.08	44.85	44.84
Consolidated ROR Tracts	9	432	35296	35377	18551	18623	81.70	81.89	42.94	43.11
Overlapping ROR & PC Tracts	6	327	22774	23210	12217	12357	69.65	70.98	37.36	37.79

Business Broadband Competition

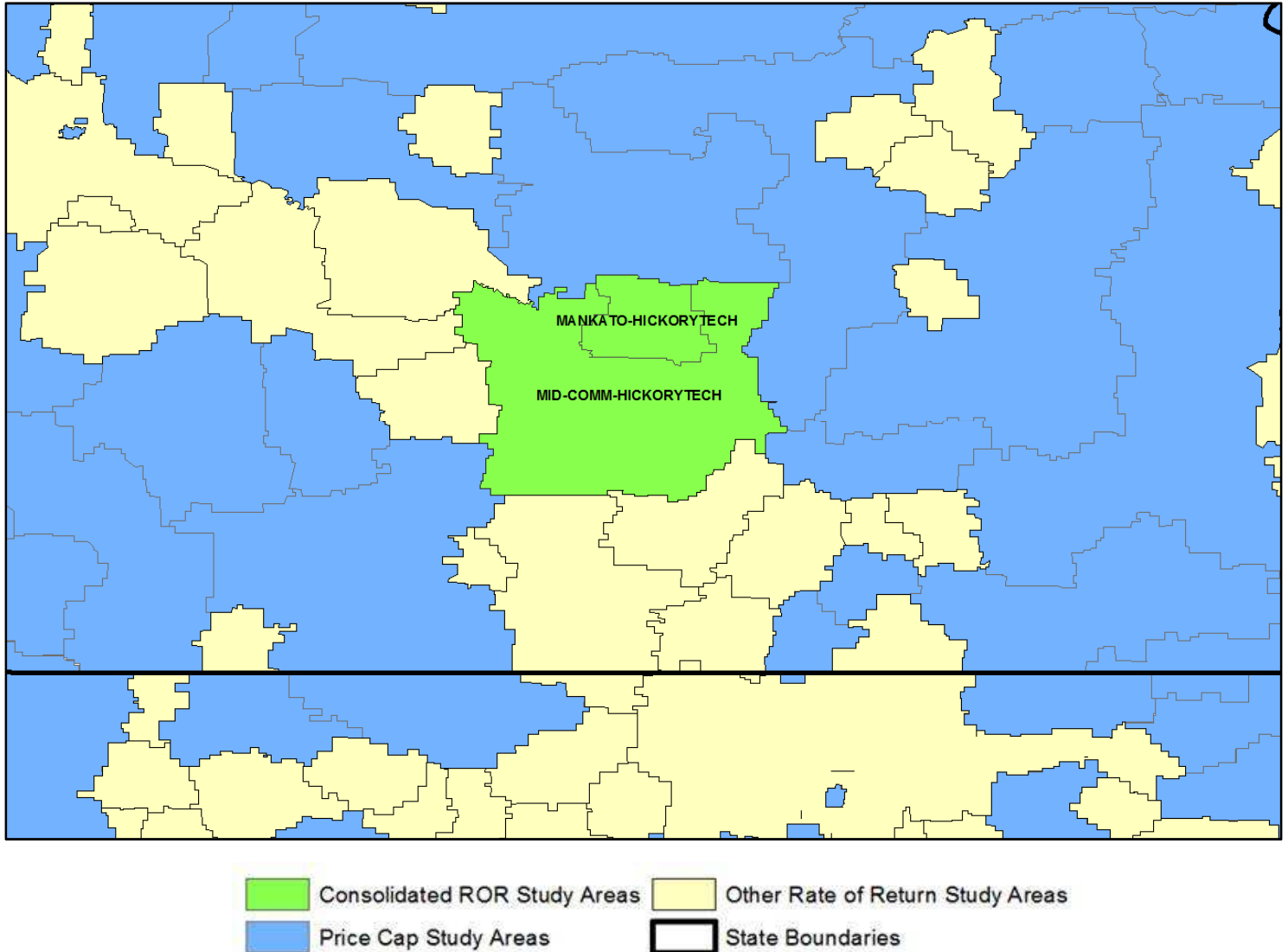
Category	Number of Tracts in Category	Number of Blocks in Category	Number of Tracts with Business Cable Service Offered	Number of Blocks with Business Cable Service Offered	Number of Tracts with Business Fiber Service Offered	Number of Blocks with Business Fiber Service Offered	Percent of Blocks with Business Cable Service Offered	Percent of Blocks with Business Fiber Service Offered
PC Non-Urbanized Area Tracts	77	12952	76	8895	62	728	68.68%	5.62%
Consolidated ROR Tracts	9	1501	9	1130	4	12	75.28%	0.80%
Overlapping ROR & PC Tracts	6	987	6	692	2	4	70.11%	0.41%

Southern Minnesota

Includes the following Rate of Return Consolidated Communications ILECs:

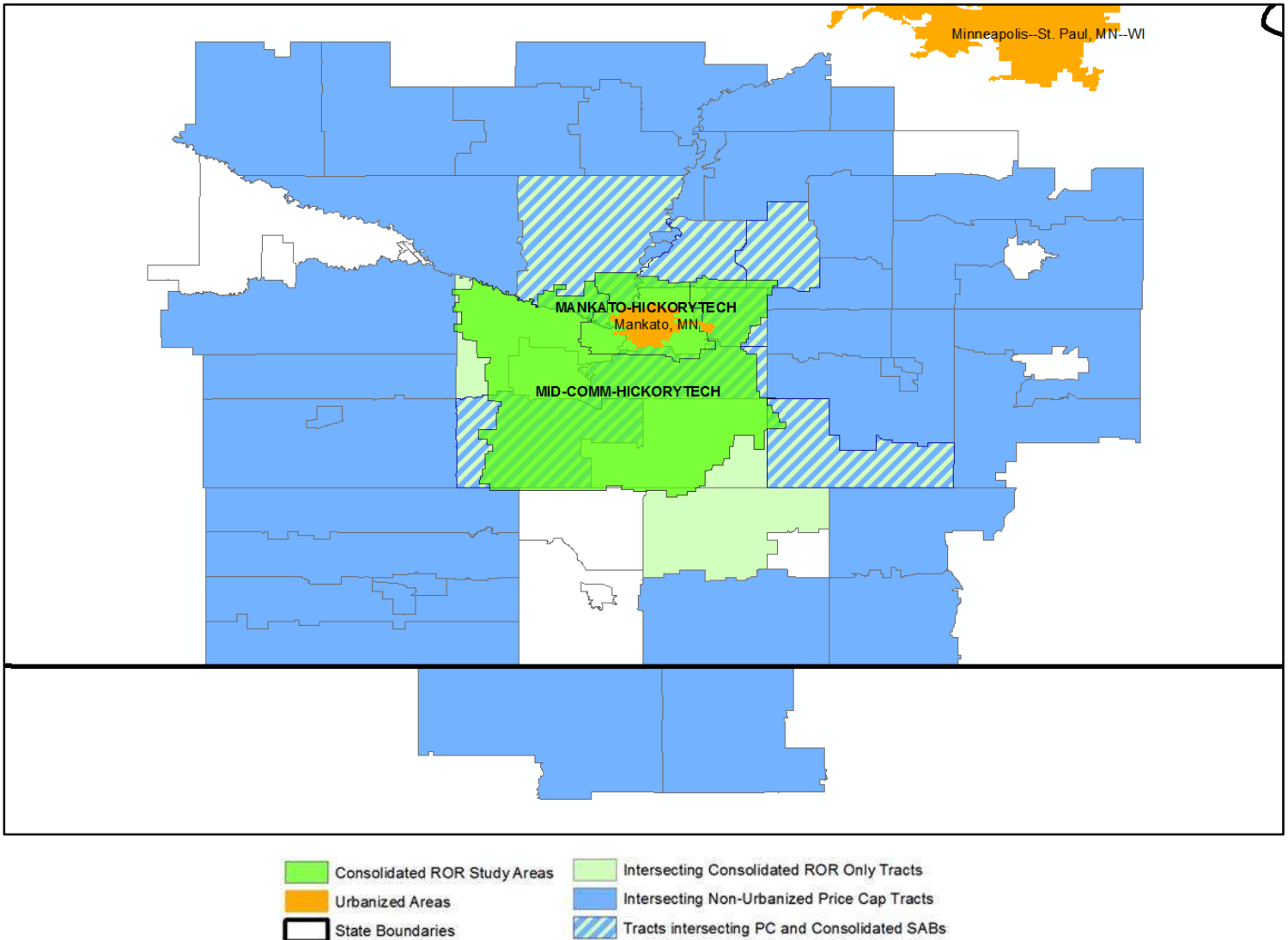
State	Company Name	SAC
MN	MID-COMM-HICKORYTECH	361375
MN	MANKATO-HICKORYTECH	361427

Study Area Boundaries



Southern Minnesota, cont'd.

Study Area and 25 Mile Radius Rural Tracts



Demographic Comparison

Category	Number of Tracts in Category	Category Land Area in Square Miles	2010 Census Population	2016 ACS Population Estimate	2010 Census Housing Units	2016 ACS Housing Units Estimate	2010 Census Population Density	2016 ACS Population Est Density	2010 Census Housing Units Density	2016 ACS Housing Units Est Density
PC Non-Urbanized Area Tracts	42	5445	167245	165920	72283	72369	30.72	30.47	13.28	13.29
Consolidated ROR Tracts	24	1427	95419	97104	40096	41381	66.87	68.05	28.10	29.00
Overlapping ROR & PC Tracts	7	848	27414	27631	11912	12229	32.33	32.58	14.05	14.42

Business Broadband Competition

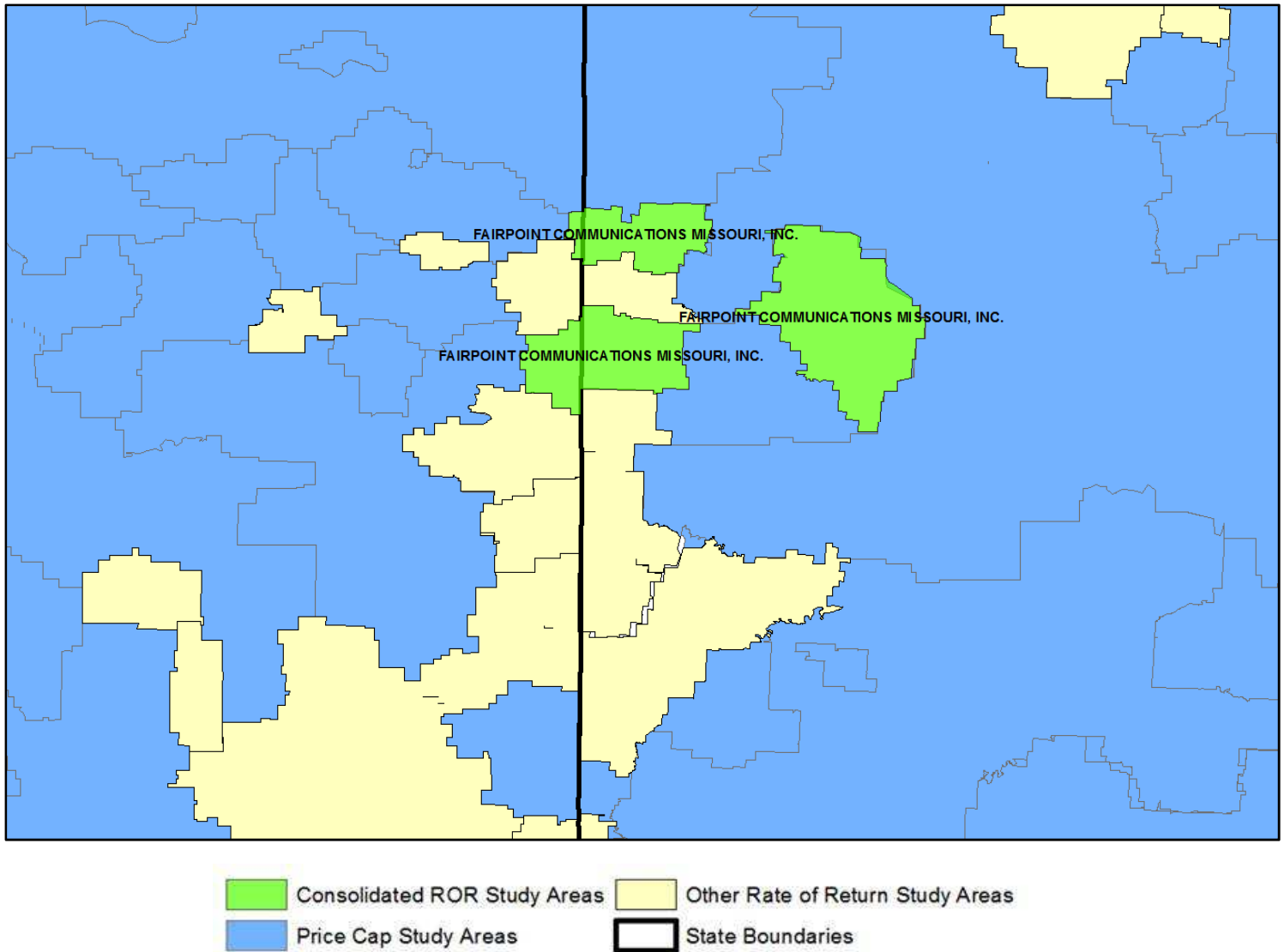
Category	Number of Tracts in Category	Number of Blocks in Category	Number of Tracts with Business Cable Service Offered	Number of Blocks with Business Cable Service Offered	Number of Tracts with Business Fiber Service Offered	Number of Blocks with Business Fiber Service Offered	Percent of Blocks with Business Cable Service Offered	Percent of Blocks with Business Fiber Service Offered
PC Non-Urbanized Area Tracts	42	16824	37	3312	34	2280	19.69%	13.55%
Consolidated ROR Tracts	24	5632	23	1643	13	68	29.17%	1.21%
Overlapping ROR & PC Tracts	7	2700	6	322	4	19	11.93%	0.70%

Missouri – FairPoint Communications

Includes the following Rate of Return Consolidated Communications ILECs:

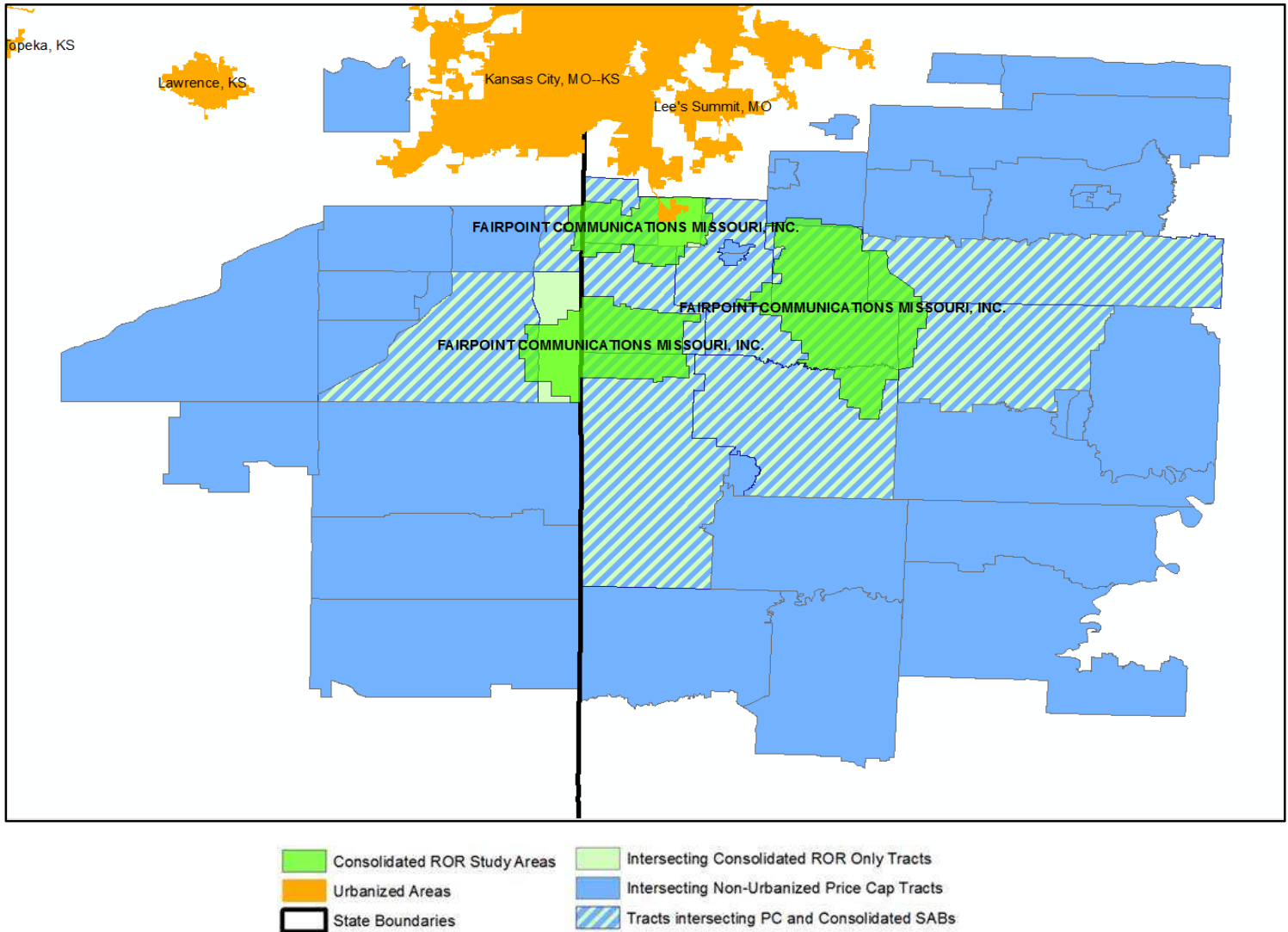
State	Company Name	SAC
MO	FAIRPOINT COMMUNICATIONS MISSOURI, INC.	421472

Study Area Boundaries



Missouri – FairPoint Communications, cont'd.

Study Area and 25 Mile Radius Rural Tracts



Demographic Comparison

Category	Number of Tracts in Category	Category Land Area in Square Miles	2010 Census Population	2016 ACS Population Estimate	2010 Census Housing Units	2016 ACS Housing Units Estimate	2010 Census Population Density	2016 ACS Population Est Density	2010 Census Housing Units Density	2016 ACS Housing Units Est Density
PC Non-Urbanized Area Tracts	44	5843	201735	201274	87942	88410	34.53	34.45	15.05	15.13
Consolidated ROR Tracts	13	1928	57963	58218	24072	24407	30.06	30.20	12.49	12.66
Overlapping ROR & PC Tracts	11	1841	47416	47564	19891	20085	25.76	25.84	10.80	10.91

Business Broadband Competition

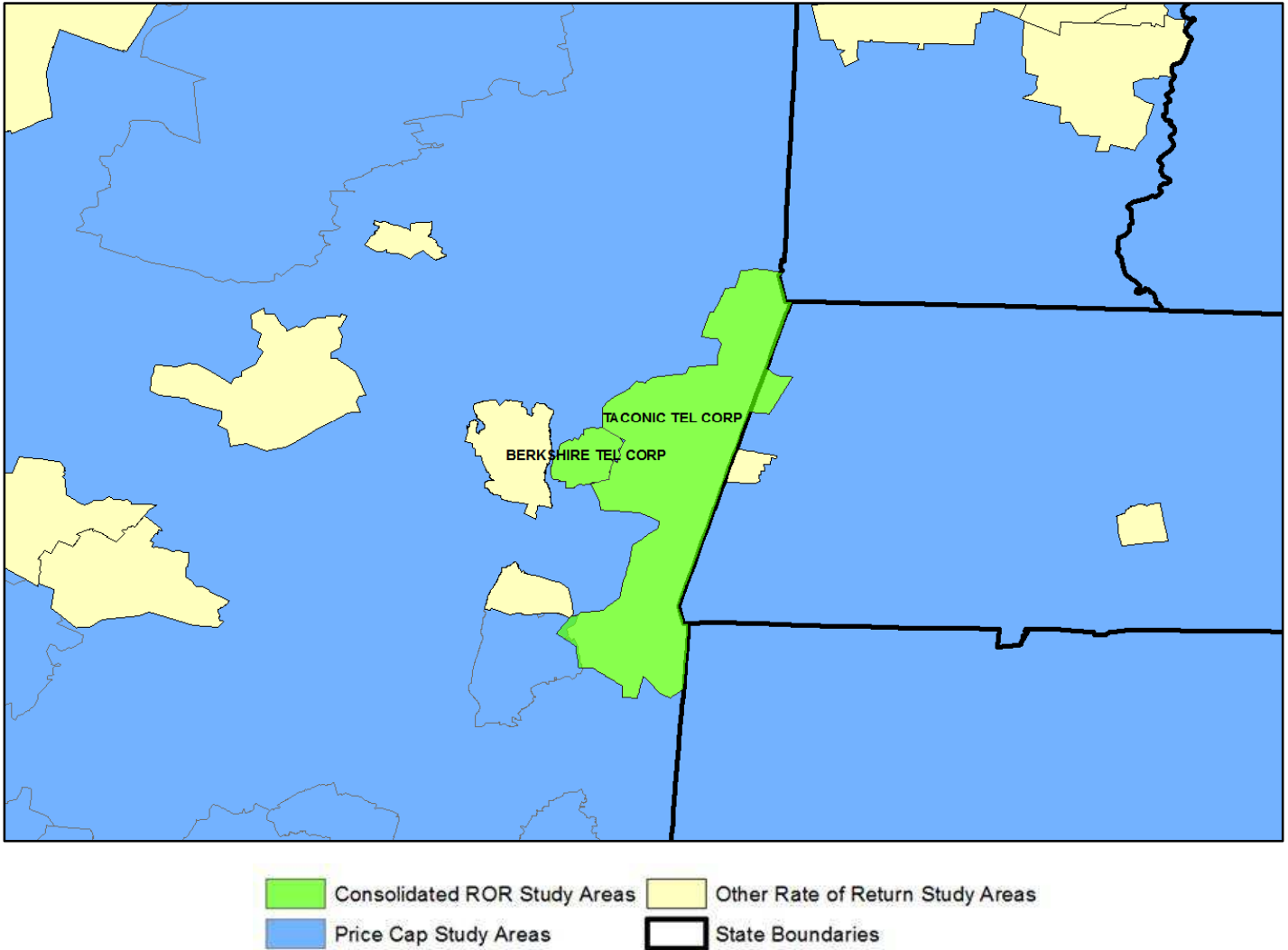
Category	Number of Tracts in Category	Number of Blocks in Category	Number of Tracts with Business Cable Service Offered	Number of Blocks with Business Cable Service Offered	Number of Tracts with Business Fiber Service Offered	Number of Blocks with Business Fiber Service Offered	Percent of Blocks with Business Cable Service Offered	Percent of Blocks with Business Fiber Service Offered
PC Non-Urbanized Area Tracts	44	24082	33	3423	24	743	14.21%	3.09%
Consolidated ROR Tracts	13	6405	7	274	8	219	4.28%	3.42%
Overlapping ROR & PC Tracts	11	5850	6	162	6	101	2.77%	1.73%

Eastern New York

Includes the following Rate of Return Consolidated Communications ILECs:

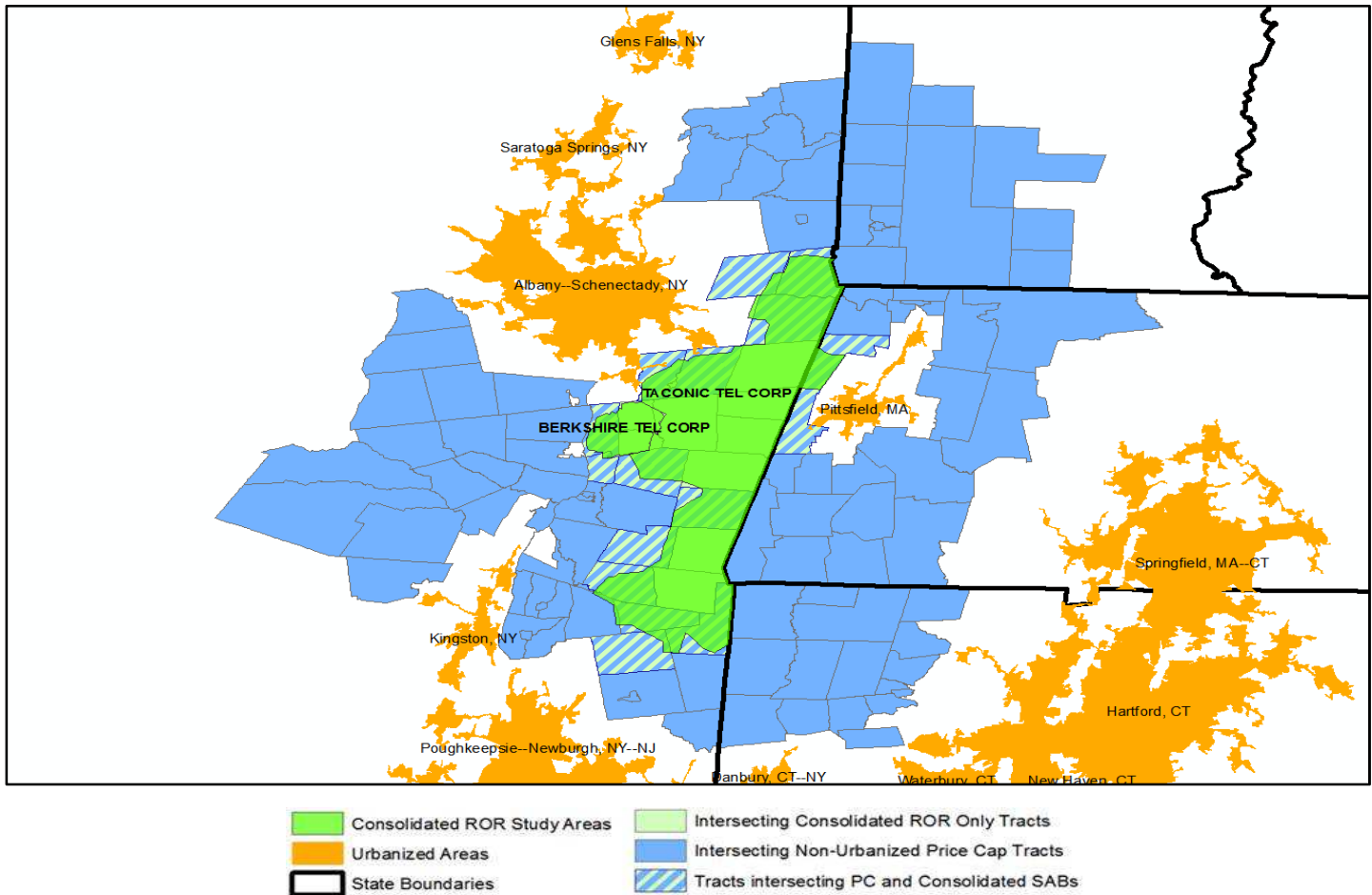
State	Company Name	SAC
NY	BERKSHIRE TEL CORP	150073
NY	TACONIC TEL CORP	150084

Study Area Boundaries



Eastern New York, cont'd.

Study Area and 25 Mile Radius Rural Tracts



Demographic Comparison

Category	Number of Tracts in Category	Category Land Area in Square Miles	2010 Census Population	2016 ACS Population Estimate	2010 Census Housing Units	2016 ACS Housing Units Estimate	2010 Census Population Density	2016 ACS Population Est Density	2010 Census Housing Units Density	2016 ACS Housing Units Est Density
All Tracts	361	6500	1340949	1337812	624023	624690	206.30	205.82	96.00	96.11
Urbanized Area Tracts	241	1907	983845	986708	431959	432453	n/a	n/a	n/a	n/a
Non-Urbanized Area Tracts	120	4593	357104	351104	192064	192237	77.75	76.44	41.82	41.85
PC Non-Urbanized Area Tracts	106	4235	318602	313617	173183	173254	75.23	74.05	40.89	40.91
Consolidated ROR Tracts	25	952	68637	68383	35922	36024	72.10	71.83	37.73	37.84
Overlapping ROR & PC Tracts	15	610	41118	41365	21013	20963	67.41	67.81	34.45	34.37

Business Broadband Competition

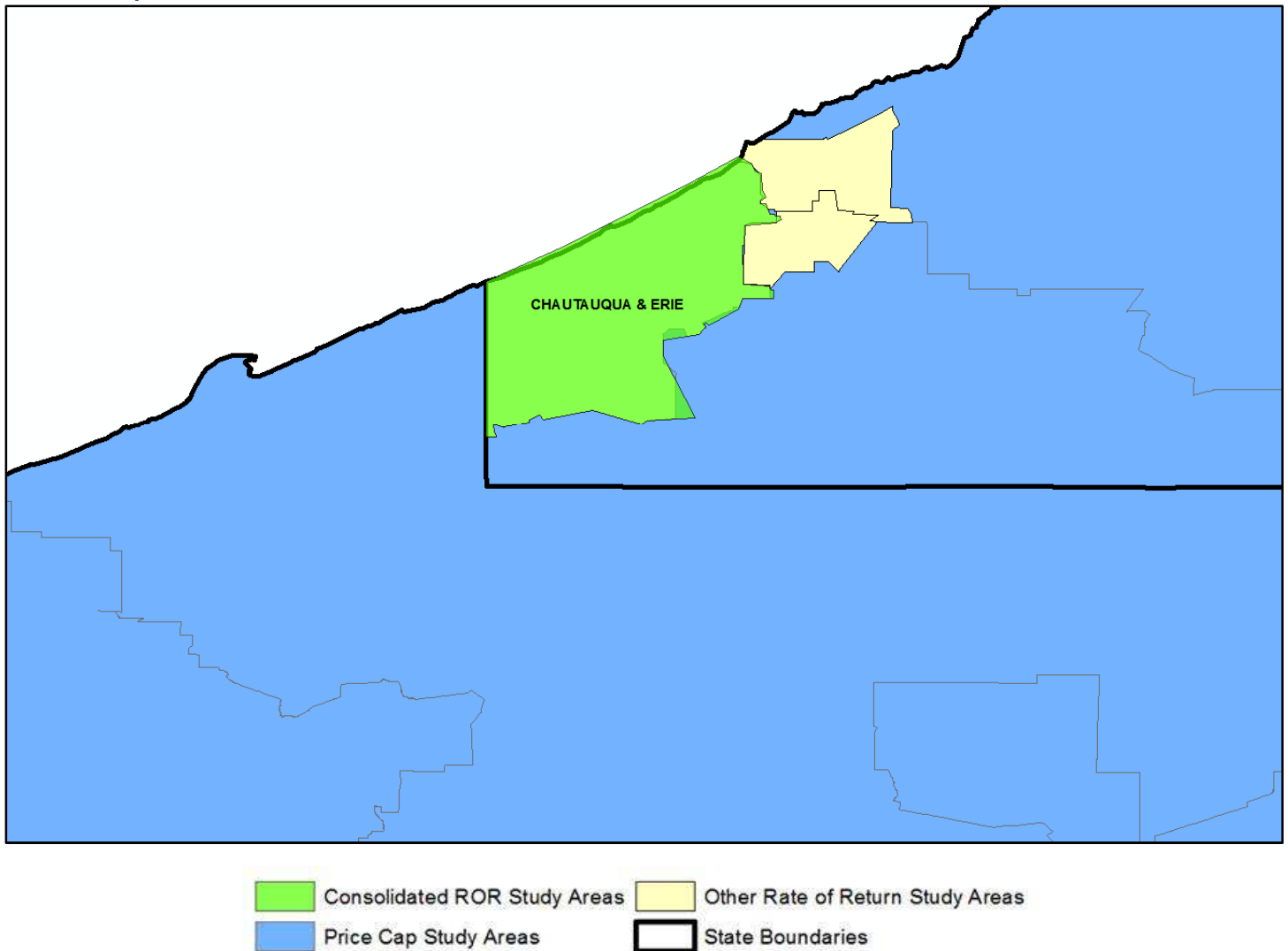
Category	Number of Tracts in Category	Number of Blocks in Category	Number of Tracts with Business Cable Service Offered	Number of Blocks with Business Cable Service Offered	Number of Tracts with Business Fiber Service Offered	Number of Blocks with Business Fiber Service Offered	Percent of Blocks with Business Cable Service Offered	Percent of Blocks with Business Fiber Service Offered
All Tracts	361	45801	353	33254	327	9304	72.61%	20.31%
Urbanized Area Tracts	241	24267	241	22153	232	7364	91.29%	30.35%
Non-Urbanized Area Tracts	120	21534	112	11101	95	1940	51.55%	9.01%
PC Non-Urbanized Area Tracts	106	19458	100	10605	87	1768	54.50%	9.09%
Consolidated ROR Tracts	25	4475	23	1607	16	141	35.91%	3.15%
Overlapping ROR & PC Tracts	15	2665	14	1222	12	120	45.85%	4.50%

New York – Chautauqua & Erie

Includes the following Rate of Return Consolidated Communications ILECs:

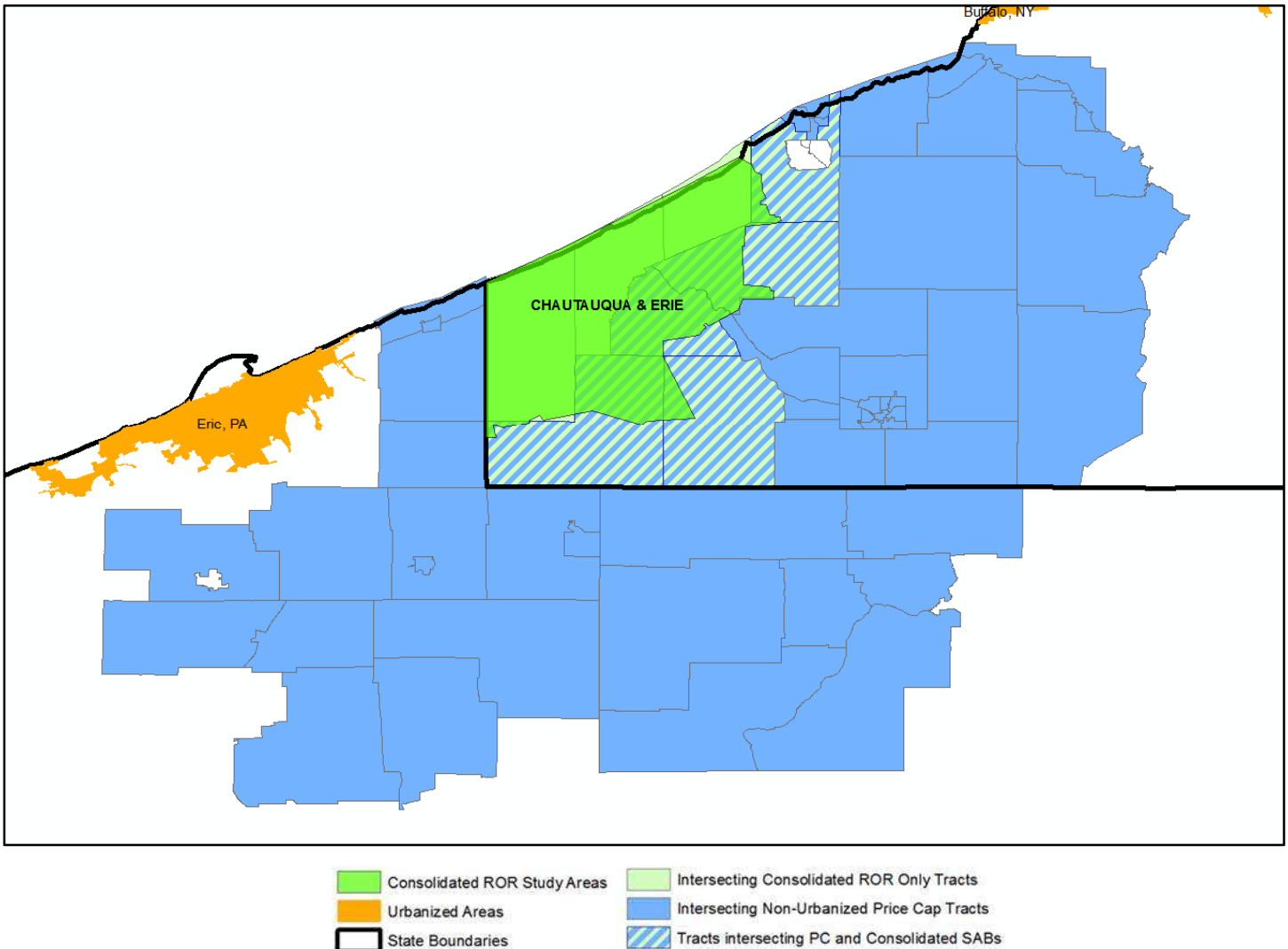
State	Company Name	SAC
NY	CHAUTAUQUA & ERIE	150078

Study Area Boundaries



New York – Chautauqua & Erie, cont'd

Study Area and 25 Mile Radius Rural Tracts



Demographic Comparison

Category	Number of Tracts in Category	Category Land Area in Square Miles	2010 Census Population	2016 ACS Population Estimate	2010 Census Housing Units	2016 ACS Housing Units Estimate	2010 Census Population Density	2016 ACS Population Density	2010 Census Housing Units Density	2016 ACS Housing Units Est Density
PC Non-Urbanized Area Tracts	56	2650	219526	215482	106399	106421	82.84	81.31	40.15	40.16
Consolidated ROR Tracts	8	515	33267	32524	18998	18584	64.60	63.15	36.89	36.09
Overlapping ROR & PC Tracts	5	350	20023	19596	12285	11973	57.21	55.99	35.10	34.21

Business Broadband Competition

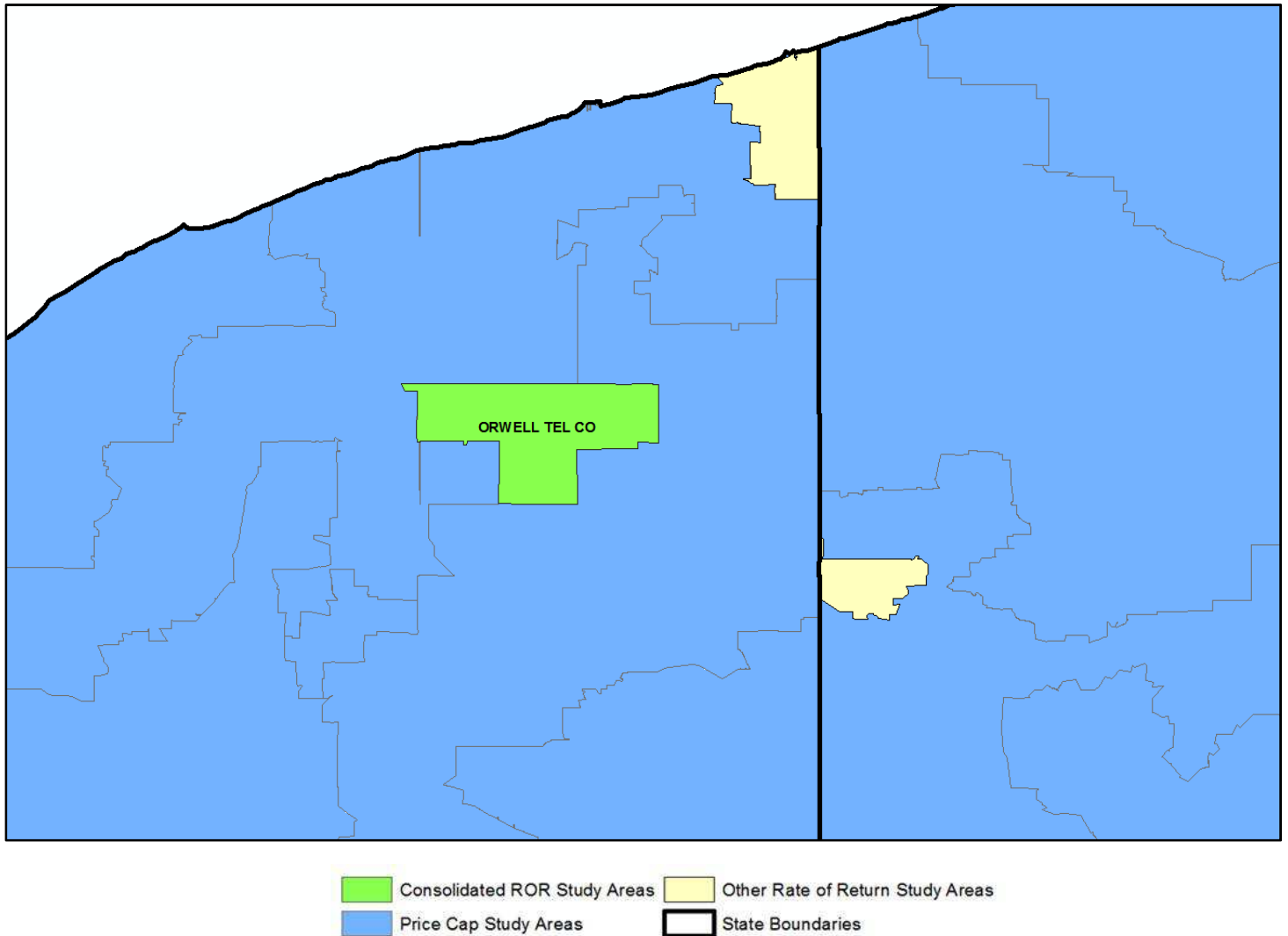
Category	Number of Tracts in Category	Number of Blocks in Category	Number of Tracts with Business Cable Service Offered	Number of Blocks with Business Cable Service Offered	Number of Tracts with Business Fiber Service Offered	Number of Blocks with Business Fiber Service Offered	Percent of Blocks with Business Cable Service Offered	Percent of Blocks with Business Fiber Service Offered
PC Non-Urbanized Area Tracts	56	11515	54	5937	44	887	51.56%	7.70%
Consolidated ROR Tracts	8	2440	8	1499	6	17	61.43%	0.70%
Overlapping ROR & PC Tracts	5	1516	5	938	5	15	61.87%	0.99%

Northeast Ohio – Orwell Tel

Includes the following Rate of Return Consolidated Communications ILECs:

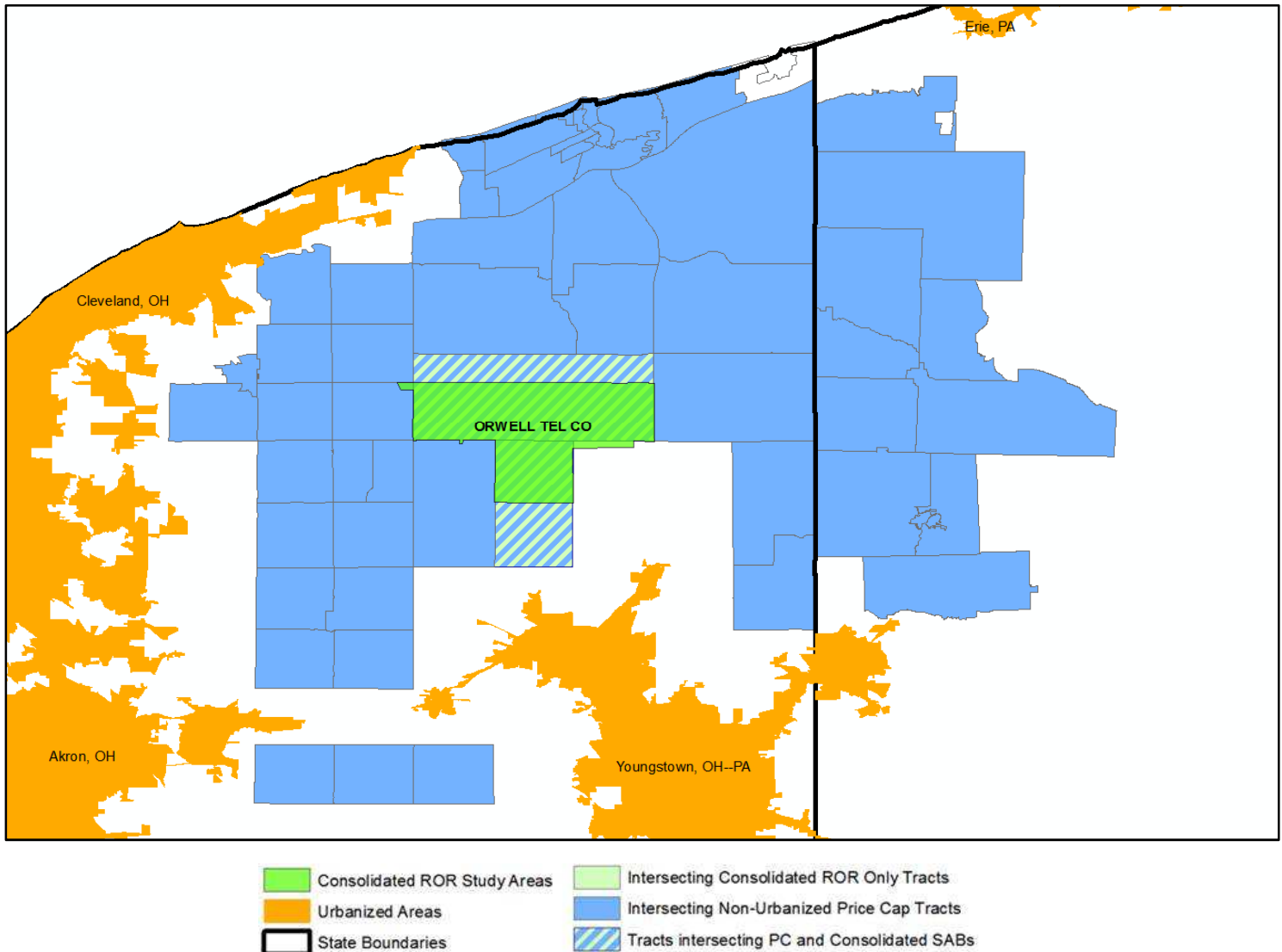
State	Company Name	SAC
OH	ORWELL TEL CO	300649

Study Area Boundaries



Northeast Ohio – Orwell Tel, cont'd.

Study Area and 25 Mile Radius Rural Tracts



Demographic Comparison

Category	Number of Tracts in Category	Category Land Area in Square Miles	2010 Census Population	2016 ACS Population Estimate	2010 Census Housing Units	2016 ACS Housing Units Estimate	2010 Census Population Density	2016 ACS Population Est. Density	2010 Census Housing Units Density	2016 ACS Housing Units Est Density
PC Non-Urbanized Area Tracts	57	1771	217461	213649	95146	93763	122.79	120.64	53.72	52.94
Consolidated ROR Tracts	2	159	12497	11969	4711	4576	78.60	75.28	29.63	28.78
Overlapping ROR & PC Tracts	2	159	12497	11969	4711	4576	78.60	75.28	29.63	28.78

Business Broadband Competition

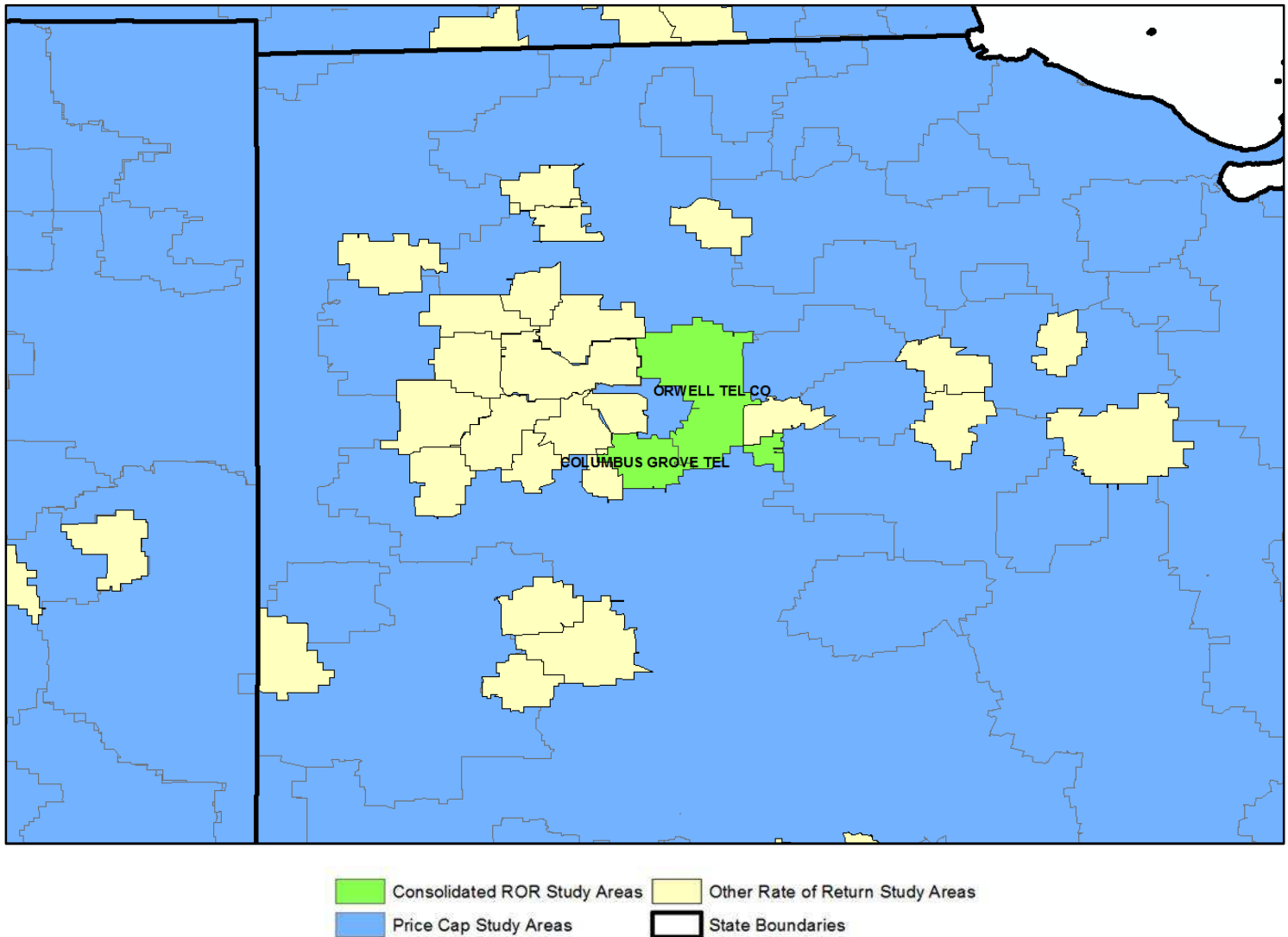
Category	Number of Tracts in Category	Number of Blocks in Category	Number of Tracts with Business Cable Service Offered	Number of Blocks with Business Cable Service Offered	Number of Tracts with Business Fiber Service Offered	Number of Blocks with Business Fiber Service Offered	Percent of Blocks with Business Cable Service Offered	Percent of Blocks with Business Fiber Service Offered
PC Non-Urbanized Area Tracts	57	8783	57	4920	45	883	56.02%	10.05%
Consolidated ROR Tracts	2	394	2	262	1	1	66.50%	0.25%
Overlapping ROR & PC Tracts	2	394	2	262	1	1	66.50%	0.25%

Northwest Ohio

Includes the following Rate of Return Consolidated Communications ILECs:

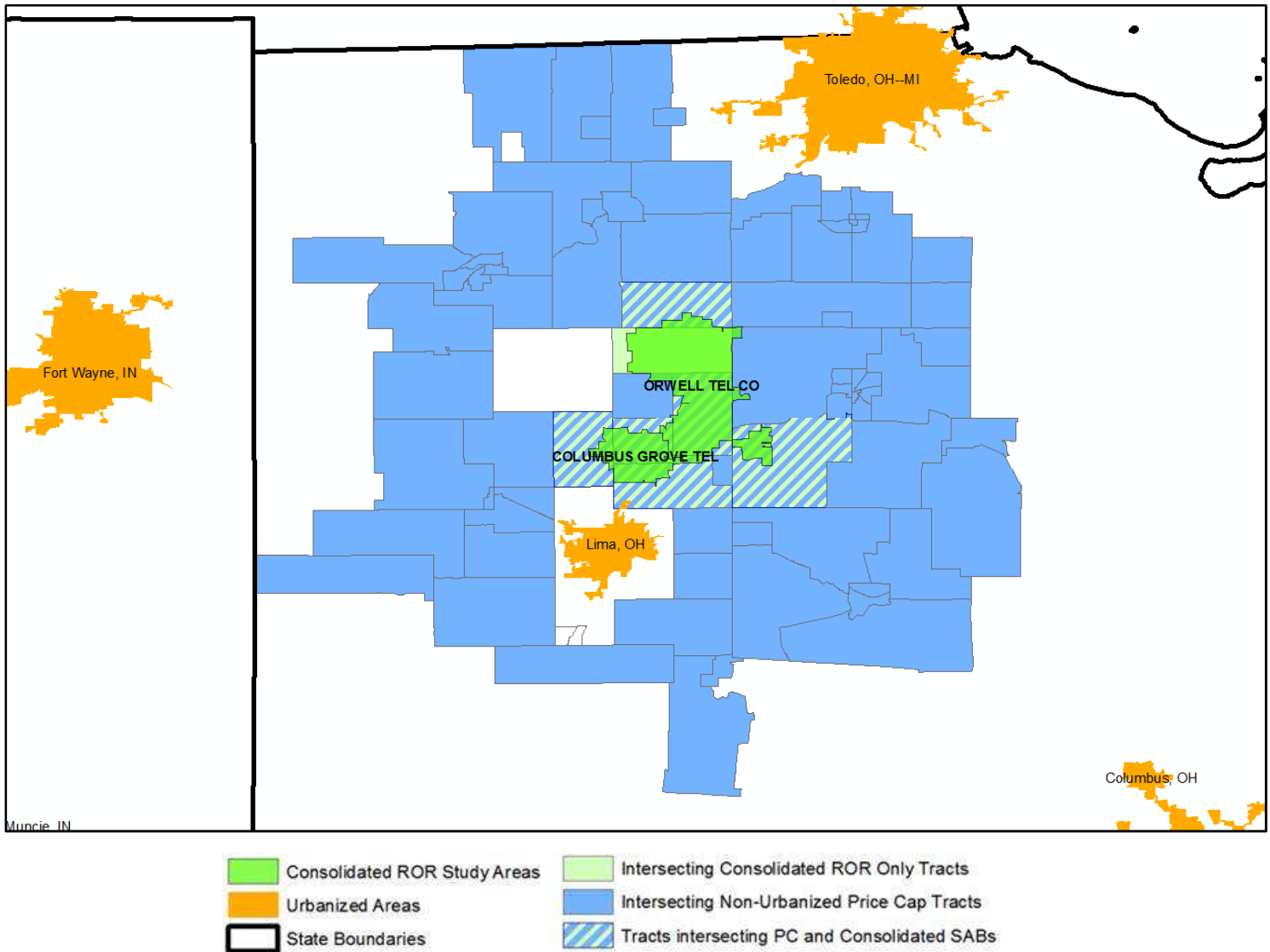
State	Company Name	SAC
OH	COLUMBUS GROVE TEL	300604
OH	ORWELL TEL CO	300649

Study Area Boundaries



Northwest Ohio, cont'd.

Study Area and 25 Mile Radius Rural Tracts



Demographic Comparison

Category	Number of Tracts in Category	Category Land Area in Square Miles	2010 Census Population	2016 ACS Population Estimate	2010 Census Housing Units	2016 ACS Housing Units Estimate	2010 Census Population Density	2016 ACS Population Est Density	2010 Census Housing Units Density	2016 ACS Housing Units Est Density
PC Non-Urbanized Area Tracts	77	3903	345530	346879	146411	147440	88.53	88.87	37.51	37.78
Consolidated ROR Tracts	7	493	28612	28491	11396	11483	58.04	57.79	23.12	23.29
Overlapping ROR & PC Tracts	6	421	24214	23889	9639	9607	57.52	56.74	22.90	22.82

Business Broadband Competition

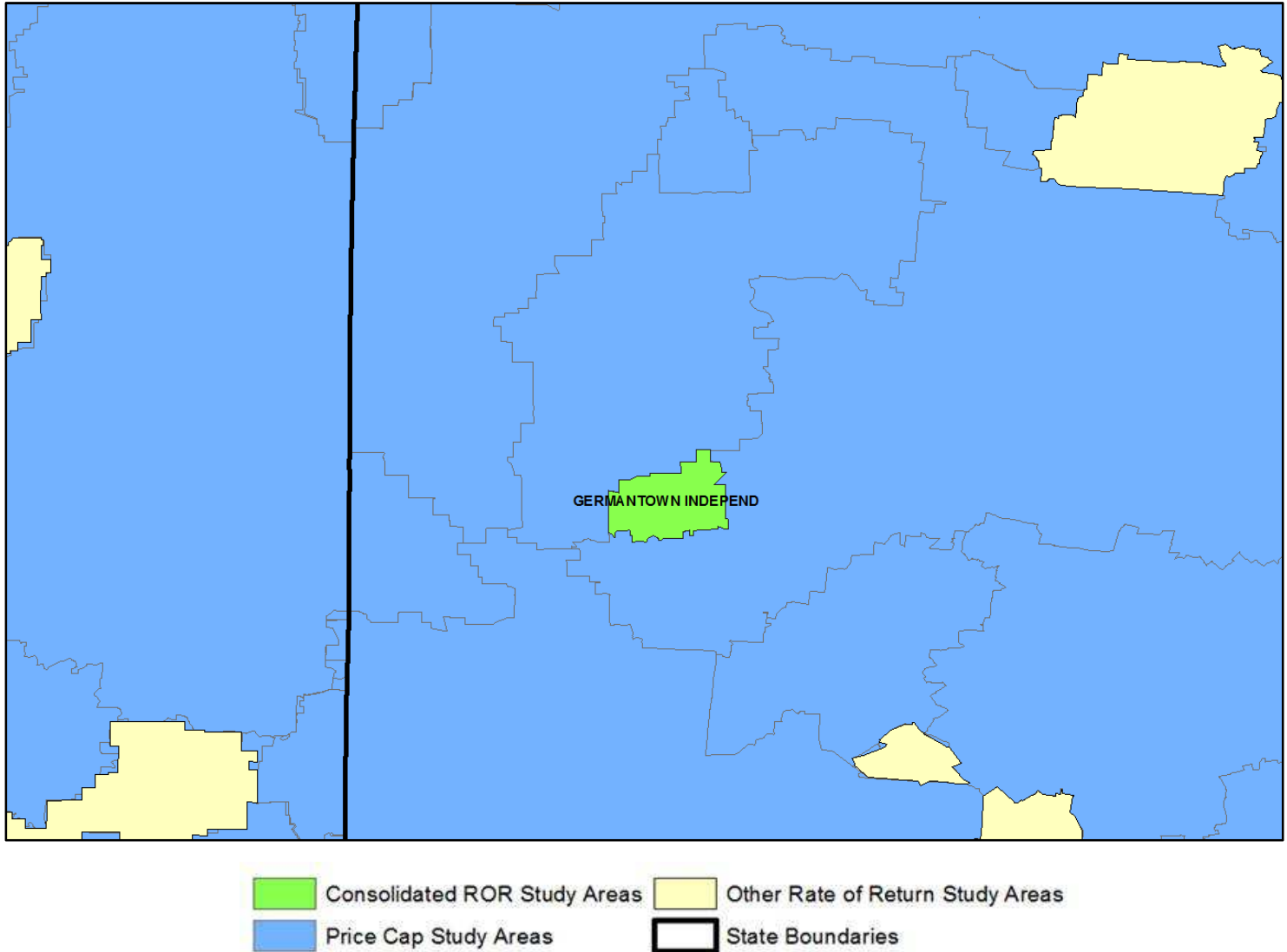
Category	Number of Tracts in Category	Number of Blocks in Category	Number of Tracts with Business Cable Service Offered	Number of Blocks with Business Cable Service Offered	Number of Tracts with Business Fiber Service Offered	Number of Blocks with Business Fiber Service Offered	Percent of Blocks with Business Cable Service Offered	Percent of Blocks with Business Fiber Service Offered
PC Non-Urbanized Area Tracts	77	24418	77	13564	75	4250	55.55%	17.41%
Consolidated ROR Tracts	7	3333	7	1920	7	293	57.61%	8.79%
Overlapping ROR & PC Tracts	6	2748	6	1578	6	271	57.42%	9.86%

Southwest Ohio – Germantown

Includes the following Rate of Return Consolidated Communications ILECs:

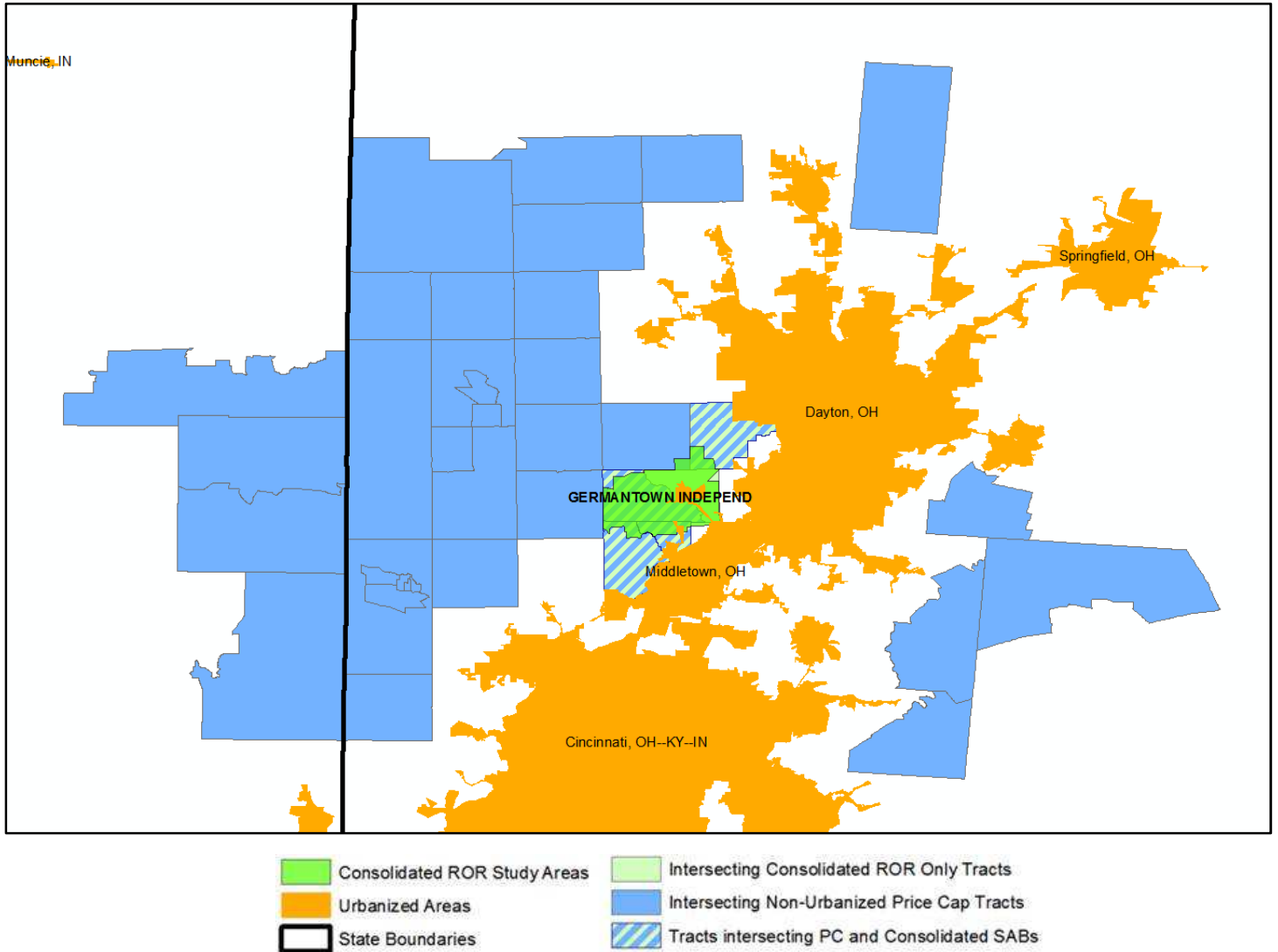
State	Company Name	SAC
OH	GERMANTOWN INDEPEND	300618

Study Area Boundaries



Southwest Ohio – Germantown, cont'd.

Study Area and 25 Mile Radius Rural Tracts



Demographic Comparison

Category	Number of Tracts in Category	Category Land Area in Square Miles	2010 Census Population	2016 ACS Population Estimate	2010 Census Housing Units	2016 ACS Housing Units Estimate	2010 Census Population Density	2016 ACS Population Est Density	2010 Census Housing Units Density	2016 ACS Housing Units Est Density
PC Non-Urbanized Area Tracts	34	1584	141843	141696	56337	56702	89.55	89.45	35.57	35.80
Consolidated ROR Tracts	5	91	19135	19380	7926	7906	210.27	212.97	87.10	86.88
Overlapping ROR & PC Tracts	4	77	12612	12971	5197	5257	163.79	168.45	67.49	68.27

Business Broadband Competition

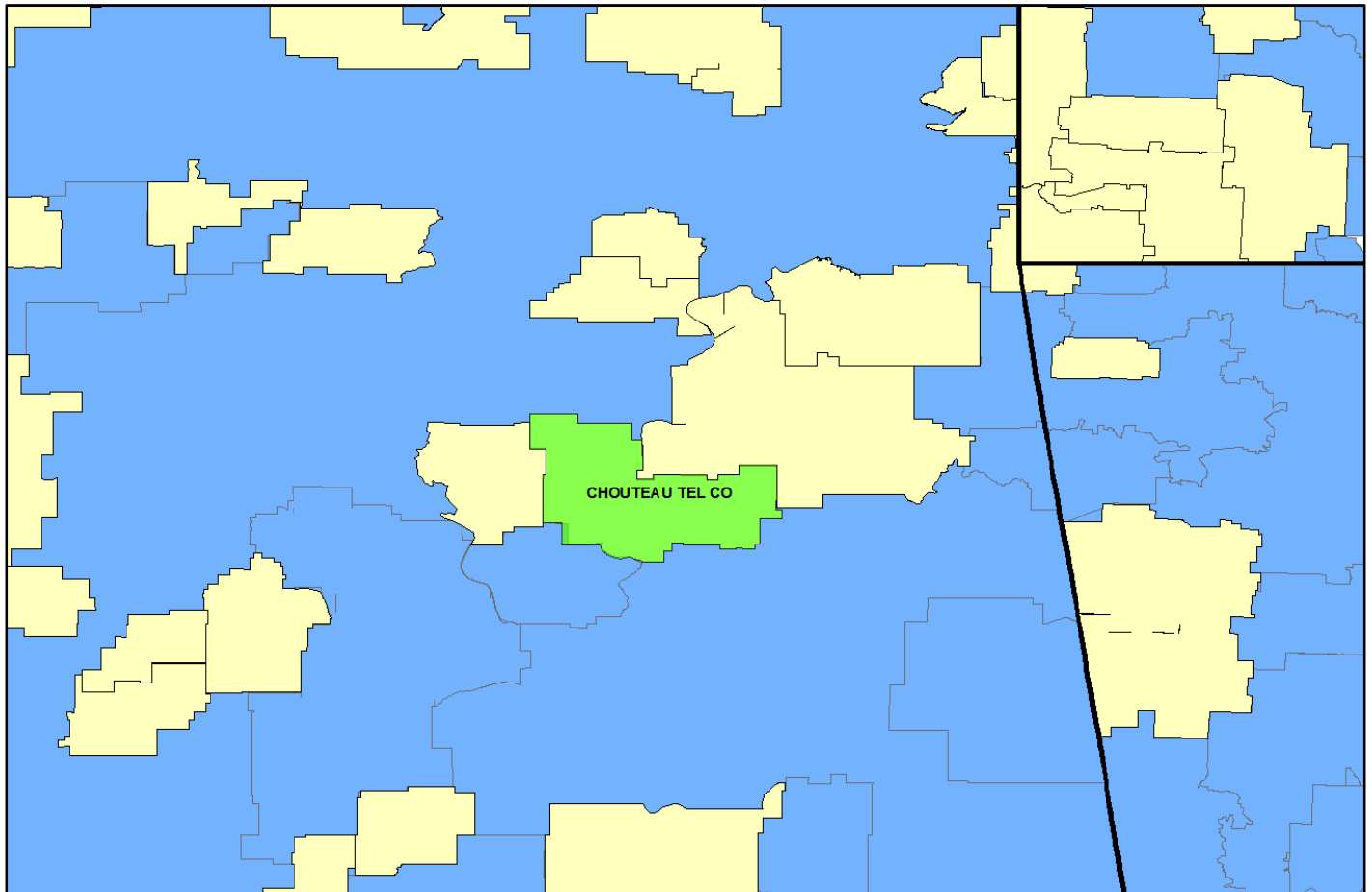
Category	Number of Tracts in Category	Number of Blocks in Category	Number of Tracts with Business Cable Service Offered	Number of Blocks with Business Cable Service Offered	Number of Tracts with Business Fiber Service Offered	Number of Blocks with Business Fiber Service Offered	Percent of Blocks with Business Cable Service Offered	Percent of Blocks with Business Fiber Service Offered
PC Non-Urbanized Area Tracts	34	8802	33	4580	25	486	52.03%	5.52%
Consolidated ROR Tracts	5	471	5	422	4	56	89.60%	11.89%
Overlapping ROR & PC Tracts	4	332	4	284	3	29	85.54%	8.73%

Oklahoma – Chouteau Tel

Includes the following Rate of Return Consolidated Communications ILECs:

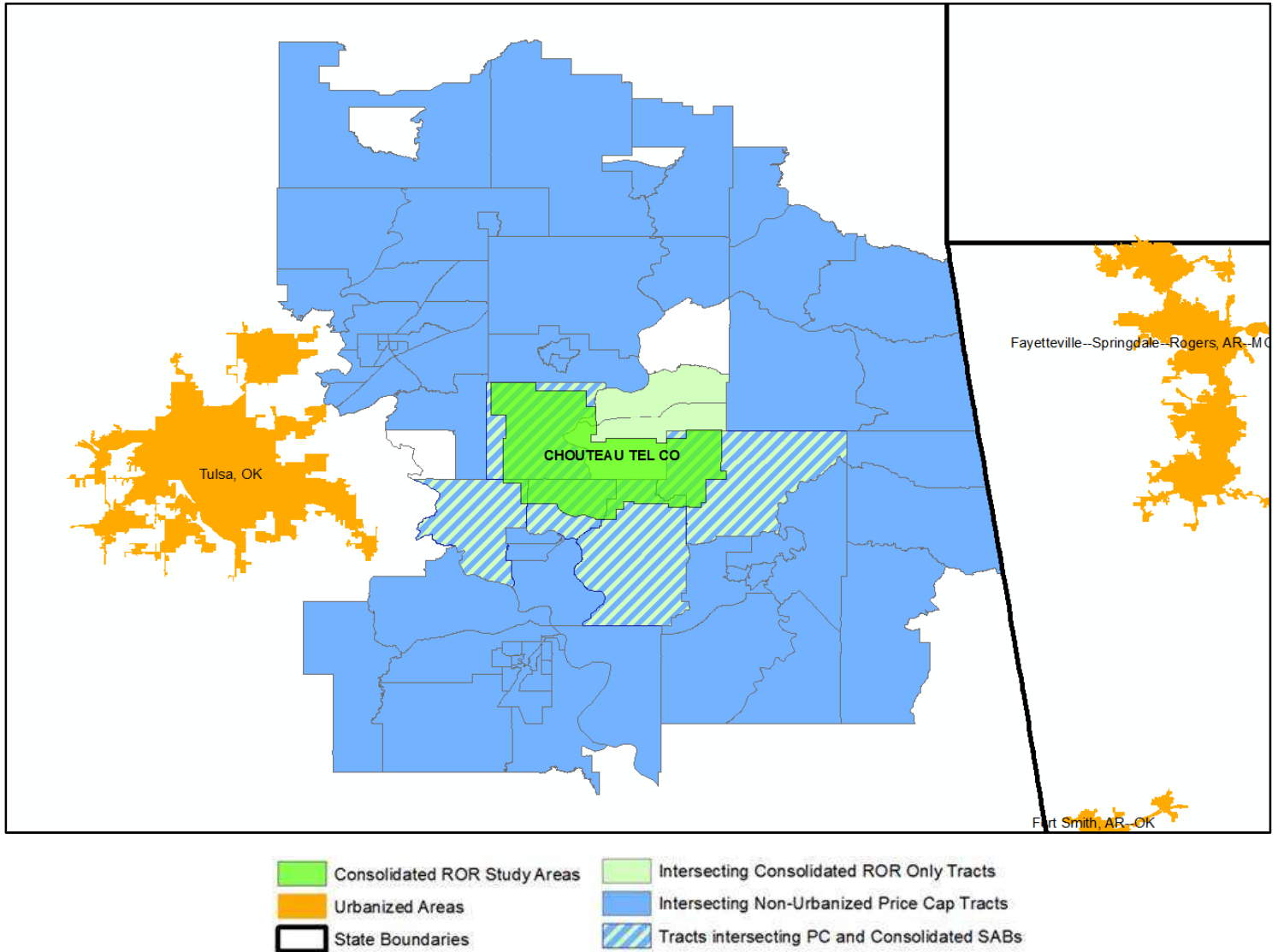
State	Company Name	SAC
OK	CHOUTEAU TEL CO	431981

Study Area Boundaries



Oklahoma – Chouteau Tel, cont'd.

Study Area and 25 Mile Radius Rural Tracts



Demographic Comparison

Category	Number of Tracts in Category	Category Land Area in Square Miles	2010 Census Population	2016 ACS Population Estimate	2010 Census Housing Units	2016 ACS Housing Units Estimate	2010 Census Population Density	2016 ACS Population Est Density	2010 Census Housing Units Density	2016 ACS Housing Units Est Density
PC Non-Urbanized Area Tracts	68	4279	267302	265296	120470	120704	62.47	62.00	28.15	28.21
Consolidated ROR Tracts	7	718	29377	29568	13378	13420	40.92	41.18	18.63	18.69
Overlapping ROR & PC Tracts	5	583	21831	22518	9856	10063	37.45	38.62	16.91	17.26

Business Broadband Competition

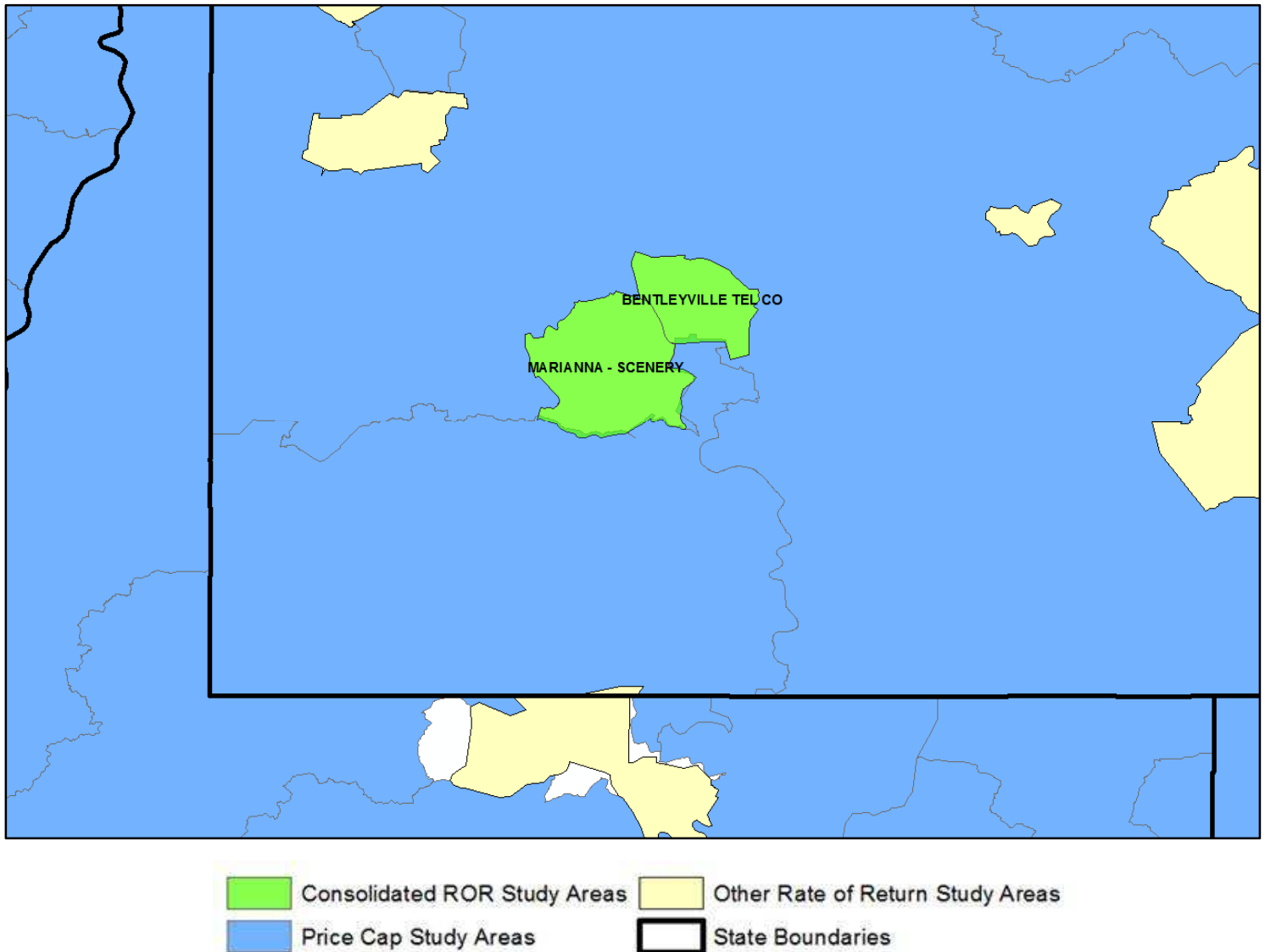
Category	Number of Tracts in Category	Number of Blocks in Category	Number of Tracts with Business Cable Service Offered	Number of Blocks with Business Cable Service Offered	Number of Tracts with Business Fiber Service Offered	Number of Blocks with Business Fiber Service Offered	Percent of Blocks with Business Cable Service Offered	Percent of Blocks with Business Fiber Service Offered
PC Non-Urbanized Area Tracts	68	22348	54	4413	53	1852	19.75%	8.29%
Consolidated ROR Tracts	7	2783	7	327	4	115	11.75%	4.13%
Overlapping ROR & PC Tracts	5	2175	5	246	2	105	11.31%	4.83%

Pennsylvania

Includes the following Rate of Return Consolidated Communications ILECs:

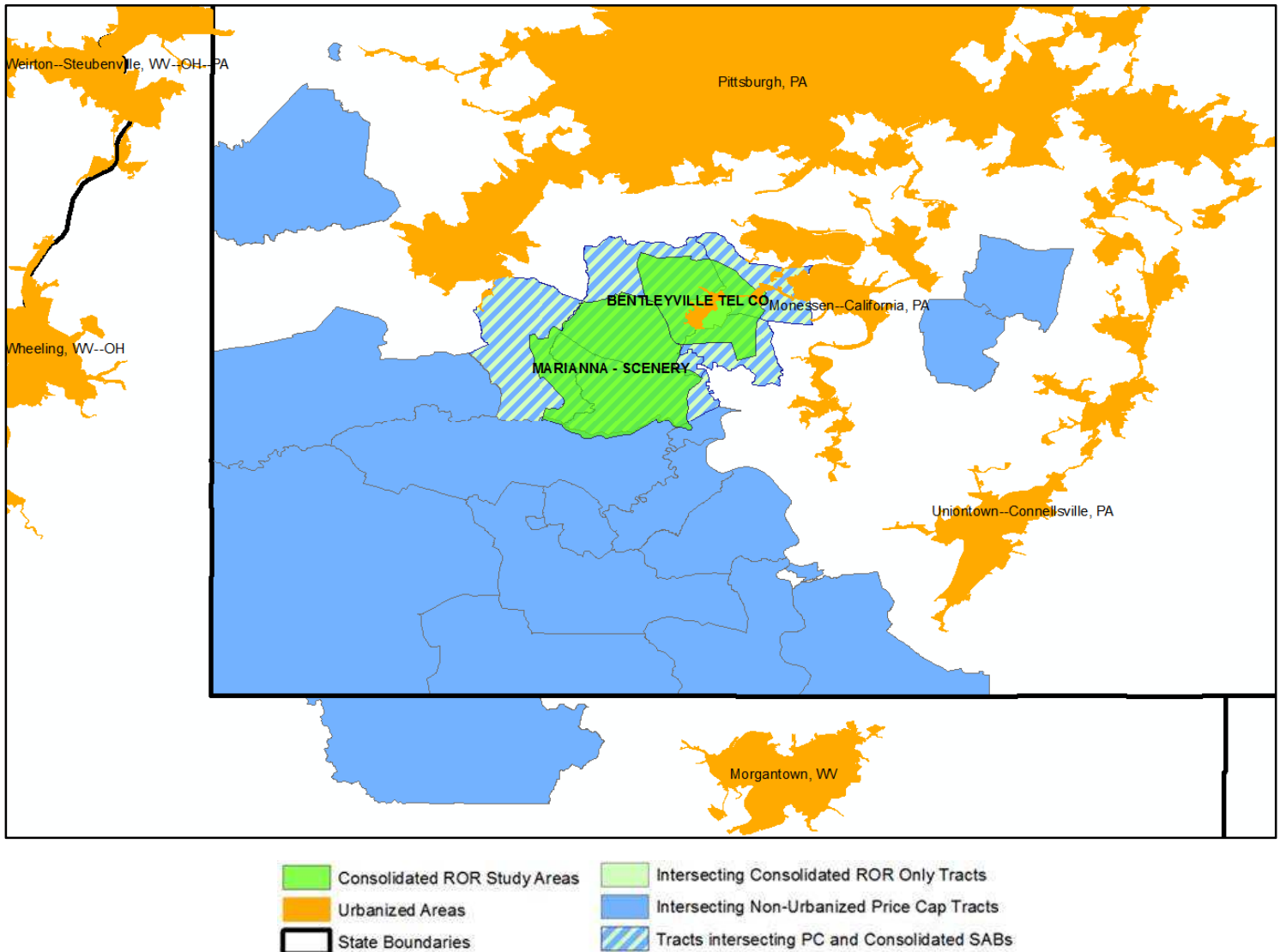
State	Company Name	SAC
PA	BENTLEYVILLE TEL CO	170145
PA	MARIANNA - SCENERY	170185

Study Area Boundaries



Pennsylvania, cont'd.

Study Area and 25 Mile Radius Rural Tracts



Demographic Comparison

Category	Number of Tracts in Category	Category Land Area in Square Miles	2010 Census Population	2016 ACS Population Estimate	2010 Census Housing Units	2016 ACS Housing Units Estimate	2010 Census Population Density	2016 ACS Population Est Density	2010 Census Housing Units Density	2016 ACS Housing Units Est Density
PC Non-Urbanized Area Tracts	19	986	72746	71571	31792	31564	73.78	72.59	32.24	32.01
Consolidated ROR Tracts	6	175	21354	20780	9730	9629	122.02	118.74	55.60	55.02
Overlapping ROR & PC Tracts	5	171	17746	17545	7966	8015	103.78	102.60	46.58	46.87

Business Broadband Competition

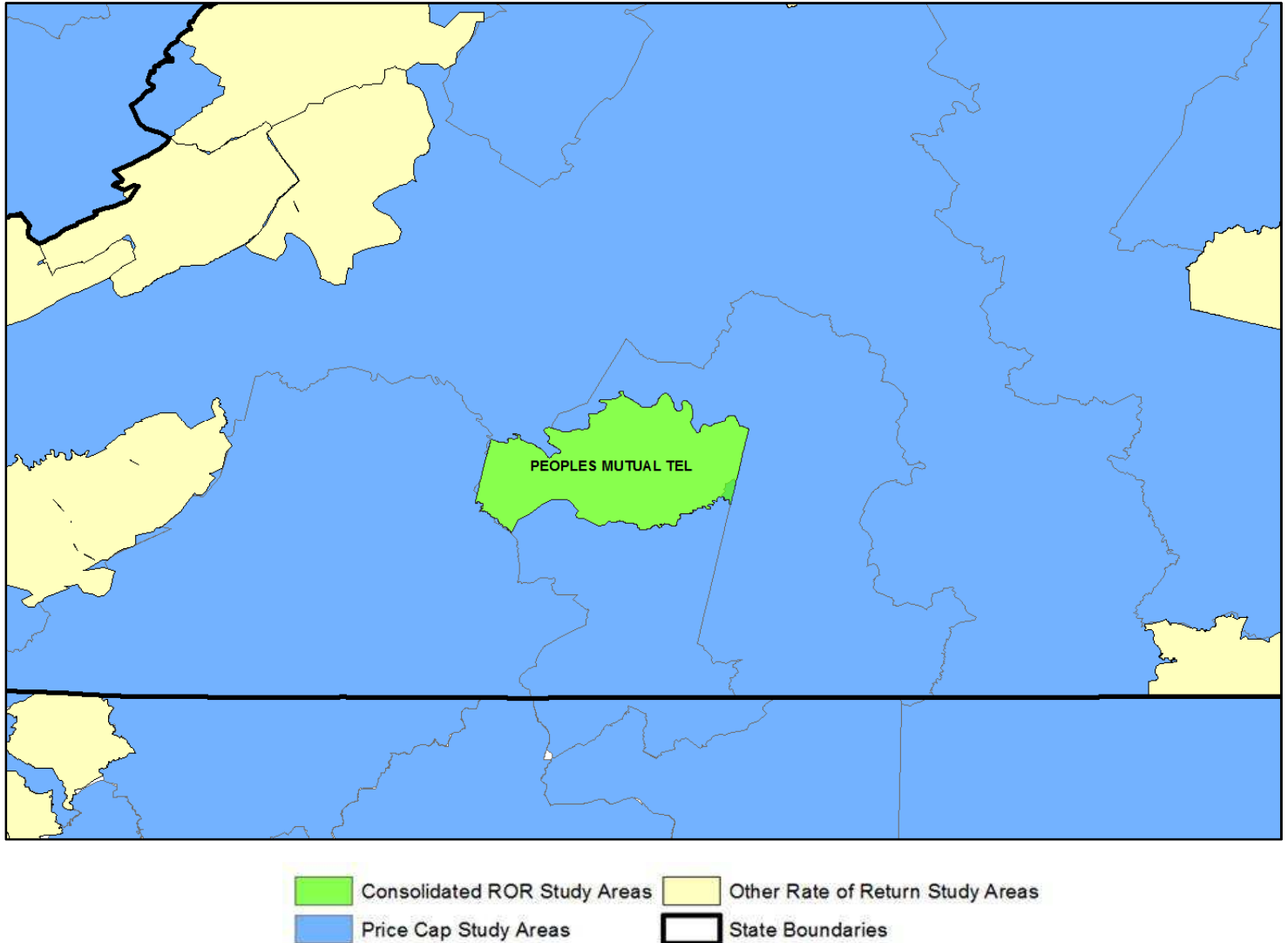
Category	Number of Tracts in Category	Number of Blocks in Category	Number of Tracts with Business Cable Service Offered	Number of Blocks with Business Cable Service Offered	Number of Tracts with Business Fiber Service Offered	Number of Blocks with Business Fiber Service Offered	Percent of Blocks with Business Cable Service Offered	Percent of Blocks with Business Fiber Service Offered
PC Non-Urbanized Area Tracts	19	5679	19	2167	13	196	38.16%	3.45%
Consolidated ROR Tracts	6	1072	6	725	5	45	67.63%	4.20%
Overlapping ROR & PC Tracts	5	926	5	599	4	42	64.69%	4.54%

Virginia – Peoples Mutual Tel

Includes the following Rate of Return Consolidated Communications ILECs:

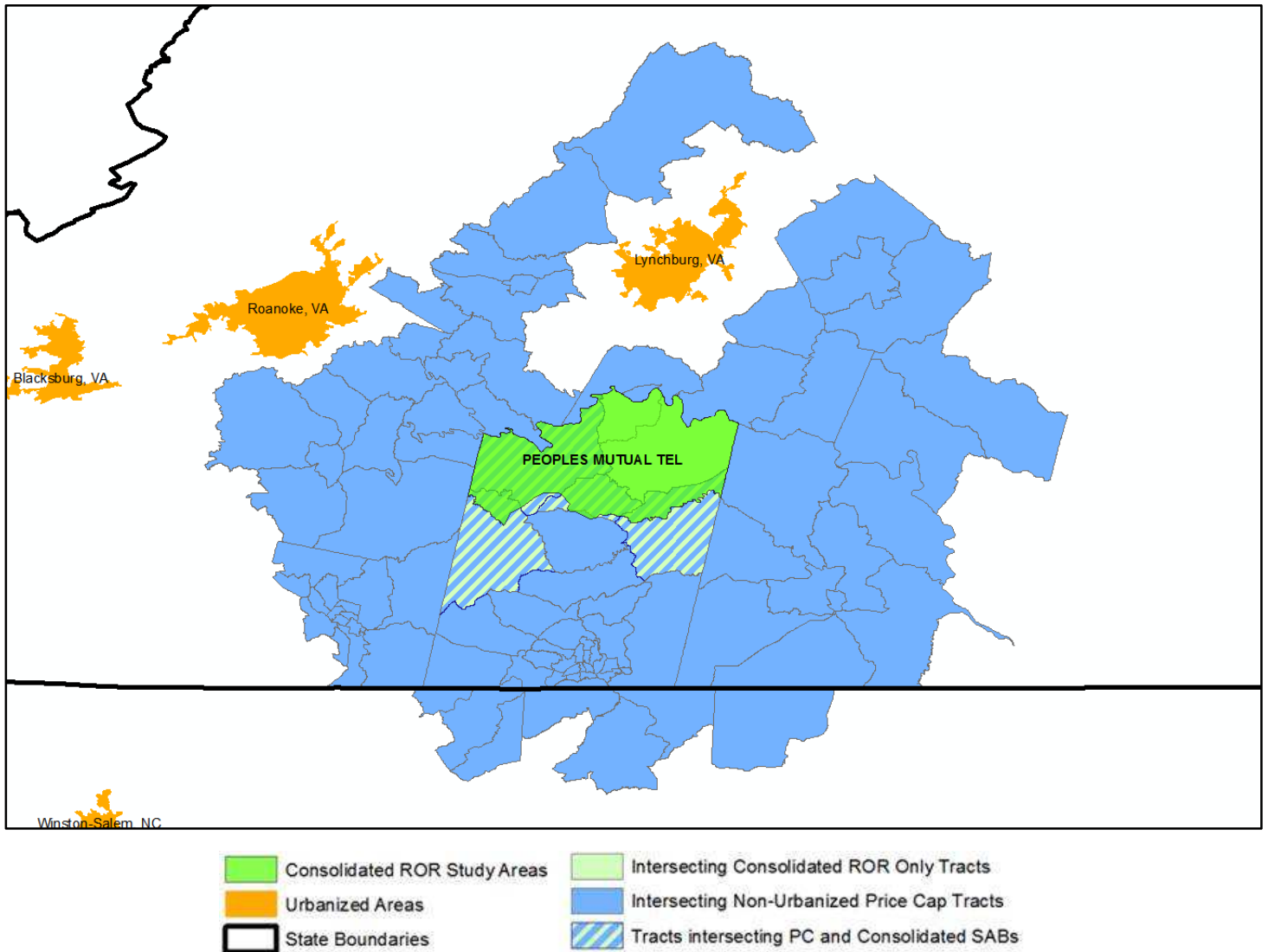
State	Company Name	SAC
VA	PEOPLES MUTUAL TEL	190244

Study Area Boundaries



Virginia – Peoples Mutual Tel, cont'd.

Study Area and 25 Mile Radius Rural Tracts



Demographic Comparison

Category	Number of Tracts in Category	Category Land Area in Square Miles	2010 Census Population	2016 ACS Population Estimate	2010 Census Housing Units	2016 ACS Housing Units Estimate	2010 Census Population Density	2016 ACS Population Est Density	2010 Census Housing Units Density	2016 ACS Housing Units Est Density
PC Non-Urbanized Area Tracts	90	4639	346868	347980	173492	177038	74.77	75.01	37.40	38.16
Consolidated ROR Tracts	6	532	21916	21308	12083	11788	41.20	40.05	22.71	22.16
Overlapping ROR & PC Tracts	4	377	13114	13006	7638	7473	34.79	34.50	20.26	19.82

Business Broadband Competition

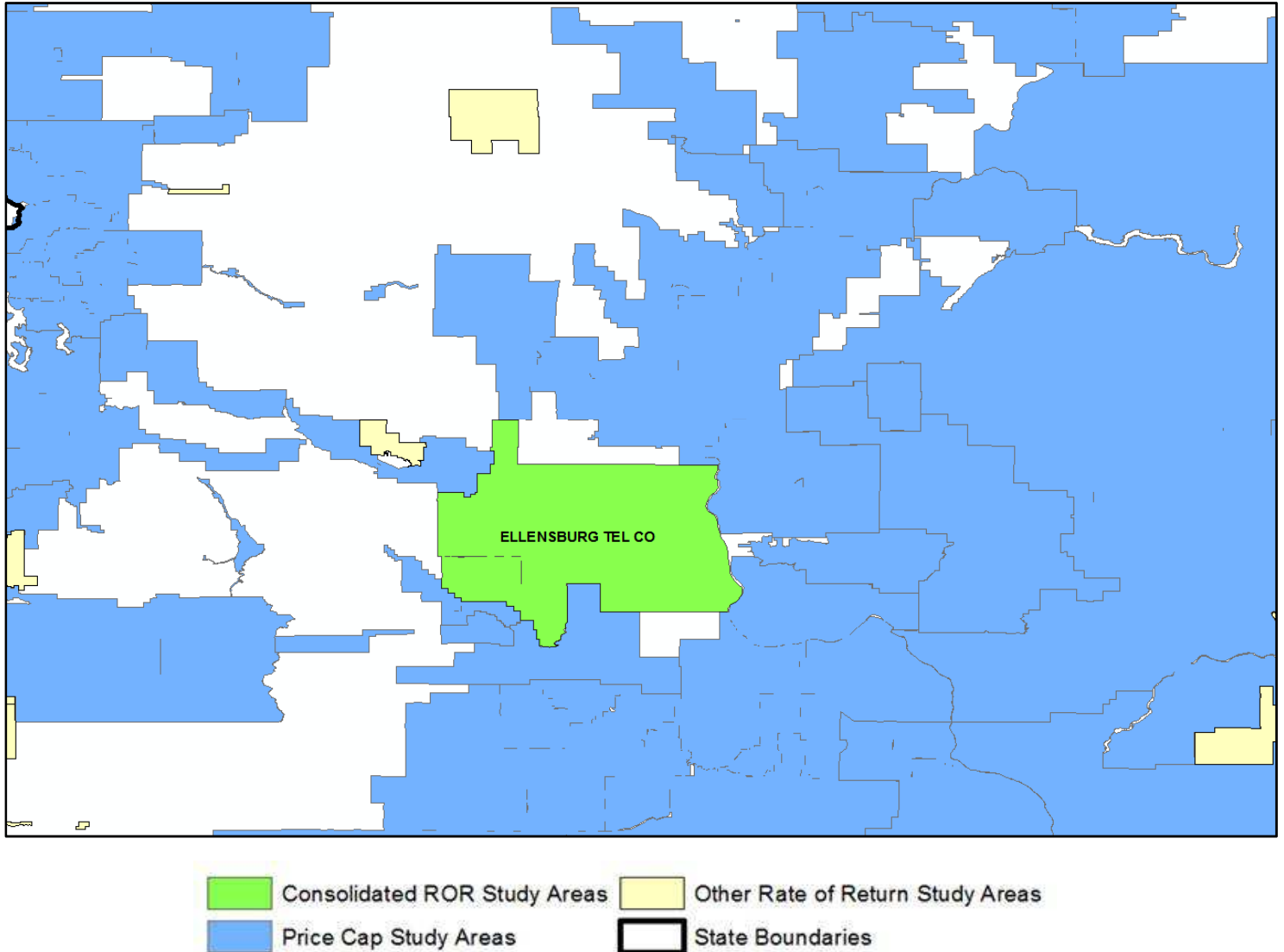
Category	Number of Tracts in Category	Number of Blocks in Category	Number of Tracts with Business Cable Service Offered	Number of Blocks with Business Cable Service Offered	Number of Tracts with Business Fiber Service Offered	Number of Blocks with Business Fiber Service Offered	Percent of Blocks with Business Cable Service Offered	Percent of Blocks with Business Fiber Service Offered
PC Non-Urbanized Area Tracts	90	23582	87	7322	68	1795	31.05%	7.61%
Consolidated ROR Tracts	6	2208	6	317	3	18	14.36%	0.82%
Overlapping ROR & PC Tracts	4	1450	4	181	2	17	12.48%	1.17%

Washington – Ellensburg Tel

Includes the following Rate of Return Consolidated Communications ILECs:

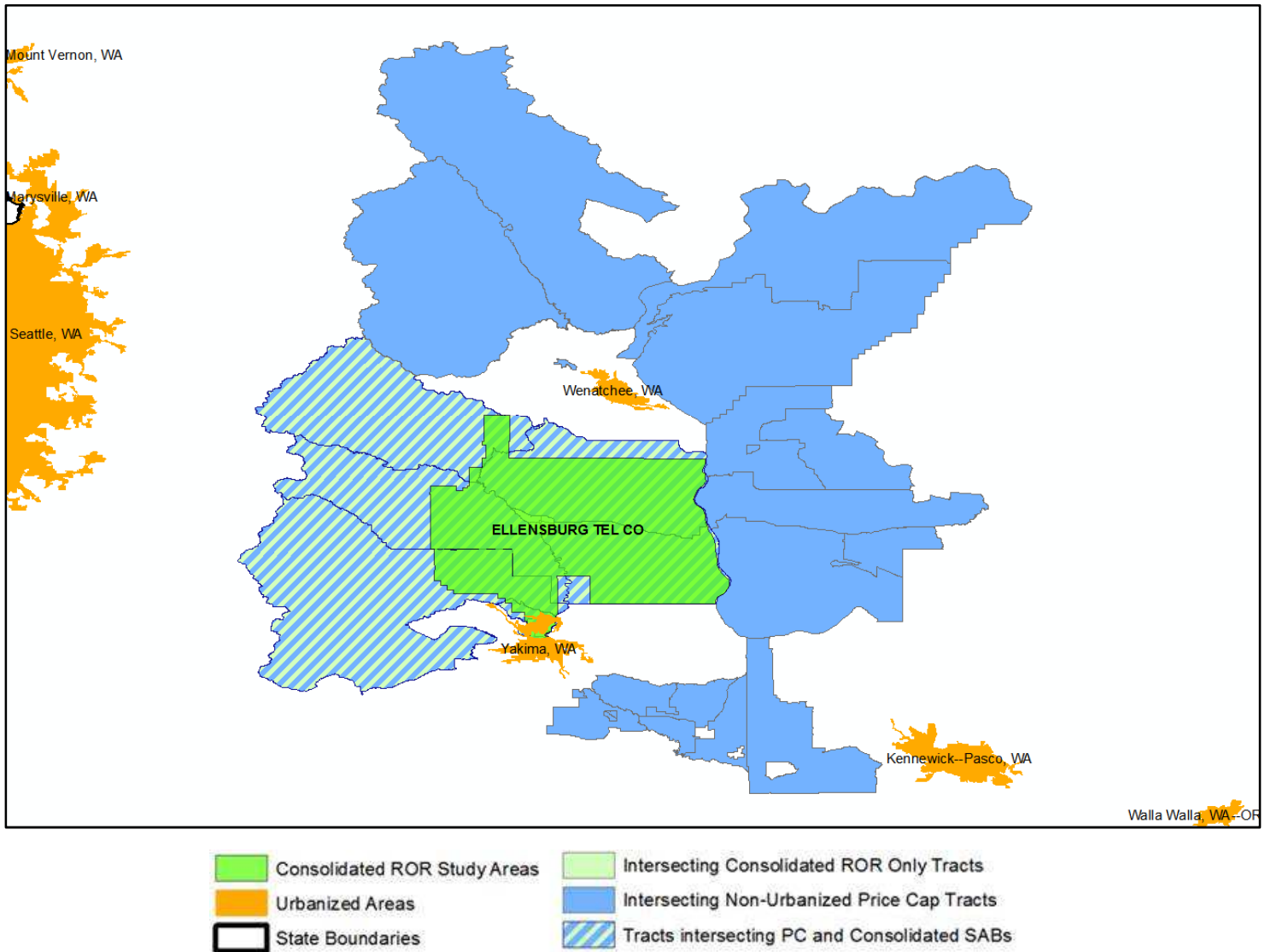
State	Company Name	SAC
WA	ELLENSBURG TEL CO	522412

Study Area Boundaries



Washington – Ellensburg Tel, cont'd.

Study Area and 25 Mile Radius Rural Tracts



Demographic Comparison

Category	Number of Tracts in Category	Category Land Area in Square Miles	2010 Census Population	2016 ACS Population Estimate	2010 Census Housing Units	2016 ACS Housing Units Estimate	2010 Census Population Density	2016 ACS Population Est Density	2010 Census Housing Units Density	2016 ACS Housing Units Est Density
PC Non-Urbanized Area Tracts	25	9528	130283	136167	55698	56921	13.67	14.29	5.85	5.97
Consolidated ROR Tracts	12	3500	61795	63879	30828	31492	17.66	18.25	8.81	9.00
Overlapping ROR & PC Tracts	7	3480	34389	35370	19484	19599	9.88	10.16	5.60	5.63

Business Broadband Competition

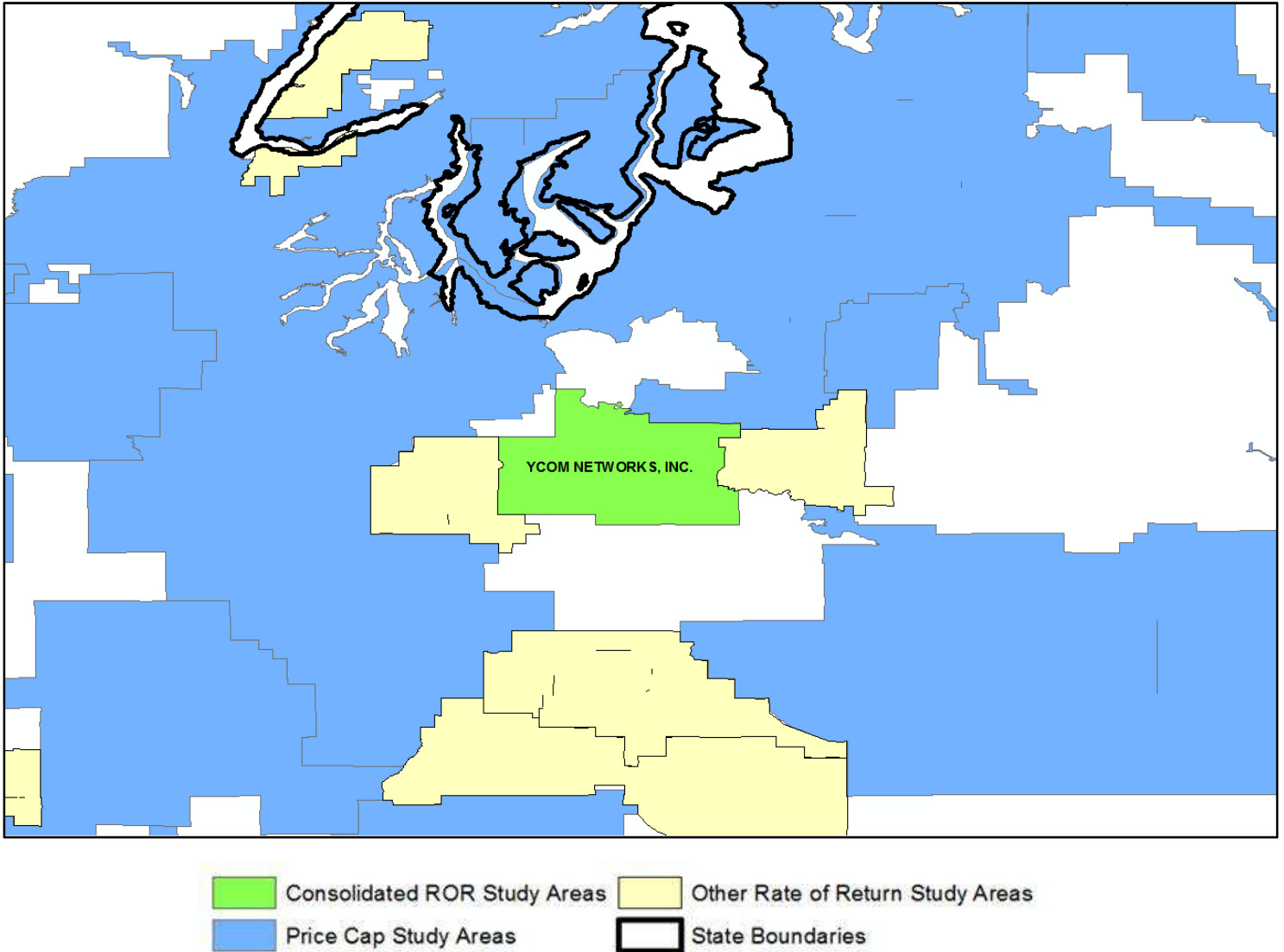
Category	Number of Tracts in Category	Number of Blocks in Category	Number of Tracts with Business Cable Service Offered	Number of Blocks with Business Cable Service Offered	Number of Tracts with Business Fiber Service Offered	Number of Blocks with Business Fiber Service Offered	Percent of Blocks with Business Cable Service Offered	Percent of Blocks with Business Fiber Service Offered
PC Non-Urbanized Area Tracts	25	11684	22	1614	21	1755	13.81%	15.02%
Consolidated ROR Tracts	12	5349	12	1438	10	182	26.88%	3.40%
Overlapping ROR & PC Tracts	7	4524	7	639	5	140	14.12%	3.09%

Washington – YCOM Networks

Includes the following Rate of Return Consolidated Communications ILECs:

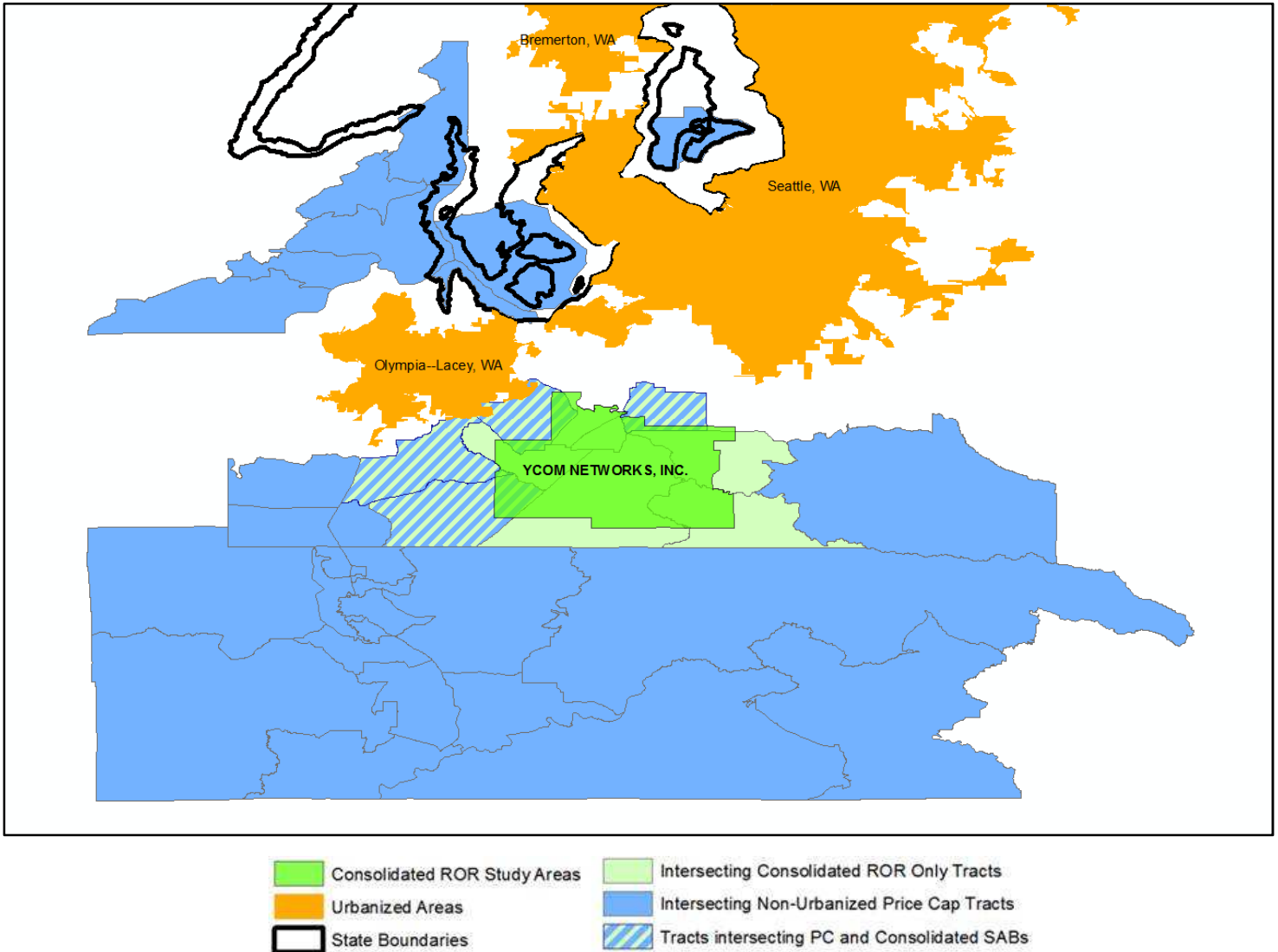
State	Company Name	SAC
WA	YCOM NETWORKS, INC.	522453

Study Area Boundaries



Washington – YCOM Networks, cont'd.

Study Area and 25 Mile Radius Rural Tracts



Demographic Comparison

Category	Number of Tracts in Category	Category Land Area in Square Miles	2010 Census Population	2016 ACS Population Estimate	2010 Census Housing Units	2016 ACS Housing Units Estimate	2010 Census Population Density	2016 ACS Population Est Density	2010 Census Housing Units Density	2016 ACS Housing Units Est Density
PC Non-Urbanized Area Tracts	33	2355	142239	143622	64531	65162	60.40	60.99	27.40	27.67
Consolidated ROR Tracts	10	405	50576	52049	20588	20807	124.88	128.52	50.83	51.38
Overlapping ROR & PC Tracts	4	165	20304	20730	8382	8438	123.05	125.64	50.80	51.14

Business Broadband Competition

Category	Number of Tracts in Category	Number of Blocks in Category	Number of Tracts with Business Cable Service Offered	Number of Blocks with Business Cable Service Offered	Number of Tracts with Business Fiber Service Offered	Number of Blocks with Business Fiber Service Offered	Percent of Blocks with Business Cable Service Offered	Percent of Blocks with Business Fiber Service Offered
PC Non-Urbanized Area Tracts	33	6622	31	2098	25	591	31.68%	8.92%
Consolidated ROR Tracts	10	1958	10	738	5	39	37.69%	1.99%
Overlapping ROR & PC Tracts	4	911	4	395	1	1	43.36%	0.11%

Appendix I: List of Consolidated Communications Study Areas

State	Company Name	SAC	Type
CA	SUREWEST TEL.	542334	PC
CO	SUNFLOWER TEL - CO	461835	ROR
CO	BIG SANDY TELECOM	462192	ROR
CO	COLUMBINE ACQ CORP	462204	ROR
FL	GTC, INC.	210291	ROR
FL	GTC, INC.	210329	ROR
FL	GTC, INC.	210339	ROR
IL	EL PASO TEL CO	341004	ROR
IL	C-R TEL CO	341009	ROR
IL	IL CONSOLIDATED TEL	341037	PC
IL	ODIN TEL EXCH INC	341065	ROR
KS	SUNFLOWER TEL CO	411835	ROR
ME	CHINA TEL CO.	100004	PC
ME	COMMUNITY SERVICE	100015	ROR
ME	STANDISH TEL CO	100025	PC
ME	NORTHLAND TEL CO-ME	103313	PC
ME	NORTHERN NEW ENGLAND TELEPHONE OPERATIONS LLC	105111	PC
MN	MID-COMM-HICKORYTECH	361375	ROR
MN	MANKATO-HICKORYTECH	361427	ROR
MO	FAIRPOINT COMMUNICATIONS MISSOURI, INC.	421472	ROR
NH	NORTHERN NEW ENGLAND TELEPHONE OPERATIONS LLC	125113	PC
NY	BERKSHIRE TEL CORP	150073	ROR
NY	CHAUTAUQUA & ERIE	150078	ROR
NY	TACONIC TEL CORP	150084	ROR
OH	COLUMBUS GROVE TEL	300604	ROR
OH	GERMANTOWN INDEPEND	300618	ROR
OH	ORWELL TEL CO	300649	ROR
OK	CHOUTEAU TEL CO	431981	ROR
PA	BENTLEYVILLE TEL CO	170145	ROR
PA	MARIANNA - SCENERY	170185	ROR
PA	NORTH PITTSBURGH TEL	170193	PC
TX	CONSOLIDATED FT BEND	442072	PC
TX	CONSOLIDATED COMM-TX	442109	PC
VA	PEOPLES MUTUAL TEL	190244	ROR
VT	NORTHLAND TEL. CO-VT	143331	PC
VT	TELEPHONE OPERATION COMPANY OF VERMONT LLC	145115	PC
WA	ELLENSBURG TEL CO	522412	ROR
WA	YCOM NETWORKS, INC.	522453	ROR

Appendix 2: Bibliography of Census Data Sources

Data for this study was downloaded from the following sources:

Study Area Boundaries – Study Area Boundaries submitted and certified by incumbent local exchange carriers and state commissions through April 27th, 2017. Because of confidentiality requests, certain boundaries for Verizon and AT&T are not provided. Estimates of confidential areas were generated by Inteserra. <https://gis-fcc.opendata.arcgis.com/datasets/public-study-areas>

State, County and Tract Boundaries – US Census Bureau 2017 TIGER/Line Shapefiles.

Urban Area and Urban Cluster Boundaries – US Census Bureau 2017 TIGER/Line Shapefiles.

2010 Population and Housing Estimates - US Census Bureau 2010 Census Population and Housing Unit Counts by Block. <https://www.census.gov/geo/maps-data/data/tiger-line.html>

2016 Population and Housing Unit Estimates – 2012 to 2016 American Community Survey 5-Year Estimates. <https://www.census.gov/programs-surveys/acs/data/summary-file.html>

Cable and Fiber Broadband Availability – FCC Form 477 Fixed Broad Deployment from FCC Form 477 as of December 2016. <https://www.fcc.gov/general/broadband-deployment-data-fcc-form-477>